

Likelihood Ratios, Confidence Intervals, and Pre-Test Probability

Appendix Table 1 displays the point estimates and 95% confidence intervals for all of the likelihood ratios (LRs) presented in this book. Also, the table presents the range of disease prevalences observed in the studies used to calculate the LRs (i.e., pre-test probability of disease; see Chapter 2). Chapter 3 presents the methods used to obtain the point estimates of LRs and their confidence intervals, and individual chapters define each physical finding and further discuss its significance.

APPENDIX TABLE 1 Likelihood Ratios, Confidence Intervals, and Pre-Test Probability

Finding	Positive Likelihood Ratio (95% CI)	Negative Likelihood Ratio (95% CI)	Pre-Test Probability (Range)
EBM BOX 6.1 DEMENTIA AND DELIRIUM			
Abnormal clock-drawing test	5.3 (2.5, 11.2)	0.5 (0.3, 0.7)	22-57
Mini-Cog score 2 or less	4.5 (2.7, 7.4)	0.1 (0.1, 0.3)	3-52
Mini-mental status 23 or less	7.7 (5.8, 10.2)	0.2 (0.2, 0.3)	4-77
Mini-mental status 20 or less	14.4 (8, 26.1)	—	9-35
Mini-mental status 21-25	2.1 (1.7, 2.6)	—	14-35
Mini-mental status 26 or more	0.1 (0.1, 0.2)	—	14-77
Confusion assessment method	12.7 (7.4, 21.8)	0.2 (0.1, 0.3)	14-64
CHAPTER 7 STANCE AND GAIT			
Positive Trendelenburg sign and gait, detecting gluteus medius tear	3.2 (1.1, 9.1)	0.4 (0.1, 1)	46
Hip abductor weakness, detecting lumbosacral radiculopathy if foot drop	24 (3.5, 165.8)	0.1 (0.1, 0.4)	43
Asymmetric arm swing, detecting focal cerebral disease	2.1 (0.5, 9.6)	0.9 (0.7, 1.0)	71
Inability to tandem walk, detecting Parkinson-plus disorder if parkinsonism	4.6 (1.3, 16)	0.2 (0.1, 0.3)	37-58
Prior fall in last year, predicting future fall	2.4 (2, 2.9)	0.6 (0.4, 0.9)	19-53

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APPENDIX TABLE I Likelihood Ratios, Confidence Intervals, and Pre-Test Probability—cont'd			
Finding	Positive Likelihood Ratio (95% CI)	Negative Likelihood Ratio (95% CI)	Pre-Test Probability (Range)
EBM BOX 7.1 GAIT ABNORMALITIES			
Able to tandem walk, detecting Parkinson disease if parkinsonism	5.4 (3.2, 9.2)	0.2 (0.1, 0.7)	42-63
Any gait or balance disorder, detecting Alzheimer dementia	0.2 (0.1, 0.3)	3.4 (1.9, 5.8)	75
Parkinsonian gait, detecting Lewy body dementia or Parkinson with dementia	8.8 (4.3, 18.1)	0.2 (0.2, 0.4)	50
Nutt's frontal gait or frontal disequilibrium	6.1 (3.2, 11.3)	0.5 (0.3, 0.7)	25
EBM BOX 7.2 PREDICTING FALLS			
Palmomental reflex present	2.8 (1.7, 4.4)	0.8 (0.7, 0.9)	32
Failure to stand with feet together and eyes open for 10 s	4.5 (2.1, 9.8)	1 (0.9, 1)	19
Failure in tandem walk (>2 errors)	1.7 (1.5, 2)	0.7 (0.6, 0.8)	19
Stops walking when talking	3 (1.3, 6.8)	0.8 (0.7, 1)	36-48
Timed up and go <15 s	0.1 (0, 0.3)	—	53
Timed up and go 15-35 s	1.1 (0.9, 1.4)	—	53
Timed up and go ≥35 s	2.6 (1.4, 4.7)	—	53
CHAPTER 8 JAUNDICE			
Caput medusa, detecting varices	1.5 (0.1, 15.7)	1 (0.9, 1.1)	58
Spider angiomas, detecting varices	1.2 (0.9, 1.6)	0.9 (0.8, 1.1)	13-46
Jaundice, detecting varices	1.1 (0.5, 2.4)	1 (0.8, 1.2)	13
Hepatomegaly, detecting varices	0.5 (0.1, 1.9)	1.1 (1, 1.3)	13
Palpable spleen, detecting varices	1.4 (1, 1.8)	0.8 (0.6, 1)	13-46
Ascites, detecting varices	1.5 (1.2, 2)	0.7 (0.6, 0.8)	13-58
Encephalopathy, detecting varices	1.3 (1.1, 1.6)	0.9 (0.8, 1)	13-58
Child class C cirrhosis, detecting hepatopulmonary syndrome	3.1 (2, 4.8)	0.4 (0.2, 0.8)	14-34
EBM BOX 8.1 HEPATOCELLULAR JAUNDICE			
Weight loss	0.8 (0.2, 3.2)	1.3 (0.5, 3.3)	65-67
Spider angiomas	4.7 (1, 22.4)	0.6 (0.5, 0.9)	65-67
Palmar erythema	9.8 (1.4, 67.6)	0.5 (0.4, 0.7)	67
Dilated abdominal veins	17.5 (1.1, 277)	0.6 (0.5, 0.8)	67

APPENDIX TABLE I Likelihood Ratios, Confidence Intervals, and Pre-Test Probability—cont'd

Finding	Positive Likelihood Ratio (95% CI)	Negative Likelihood Ratio (95% CI)	Pre-Test Probability (Range)
Ascites	4.4 (1.1, 17.1)	0.6 (0.5, 0.8)	67
Palpable spleen	2.9 (1.2, 6.8)	0.7 (0.6, 0.9)	65-67
Palpable gallbladder	0.04 (0, 0.7)	1.4 (1.1, 1.9)	67
Palpable liver	0.9 (0.8, 1.1)	1.4 (0.6, 3.4)	65-67
Liver tenderness	1.4 (0.8, 2.6)	0.8 (0.7, 1.1)	65-67
EBM BOX 8.2 CIRRHOSIS			
Spider angiomas	4.2 (2.3, 7.6)	0.6 (0.5, 0.7)	7-67
Palmar erythema	3.7 (1.4, 9.8)	0.6 (0.4, 0.9)	11-67
Gynecomastia	7 (5.2, 9.4)	0.6 (0.3, 1.1)	11-16
Reduction of body or pubic hair	8.8 (6.3, 12.5)	0.6 (0.4, 1)	11-16
Jaundice	3.8 (2, 7.2)	0.8 (0.8, 0.9)	11-53
Dilated abdominal wall veins	9.5 (1.8, 49.2)	0.8 (0.6, 1)	11-55
Hepatomegaly	2.3 (1.6, 3.3)	0.6 (0.4, 0.7)	7-67
Palpable liver in epigastrium	2.7 (1.9, 3.9)	0.3 (0.1, 0.9)	7-37
Liver edge firm to palpation	3.3 (2.2, 4.9)	0.4 (0.3, 0.4)	11-67
Splenomegaly	2.5 (1.6, 3.8)	0.8 (0.7, 0.9)	18-67
Ascites	6.6 (3.6, 12.1)	0.8 (0.7, 0.8)	16-55
Peripheral edema	3 (1.9, 4.8)	0.7 (0.6, 0.9)	16-55
Encephalopathy	8.8 (3.3, 23.7)	0.9 (0.8, 1)	16-39
EBM BOX 8.3 HEPATOPULMONARY SYNDROME			
Clubbing	4 (2.2, 7.1)	0.5 (0.4, 0.8)	14-34
Cyanosis	3.6 (2.2, 5.7)	0.6 (0.3, 1.2)	19-34
Palmar erythema	1.8 (0.8, 3.9)	0.6 (0.2, 1.5)	14-19
Spider angiomas	1.6 (1.3, 2.1)	0.5 (0.3, 0.9)	14-34
Ascites	1.2 (0.9, 1.6)	0.8 (0.5, 1.5)	14-18
EBM BOX 8.4 PORTAL-PULMONARY HYPERTENSION			
Blood pressure $\geq 140/90$	7.3 (2.5, 21.6)	0.4 (0.2, 1)	15
O ₂ sat <92%	2.4 (0.5, 10.1)	0.8 (0.6, 1.3)	15
Elevated neck veins	2 (0.2, 16.6)	0.9 (0.7, 1.2)	15
Right ventricular heave	8.8 (1.7, 44.7)	0.7 (0.4, 1.1)	15
Loud P2	17.6 (2.1, 149)	0.6 (0.4, 1.1)	15
Ascites, edema	1.2 (0.7, 1.9)	0.7 (0.2, 2.4)	15
CHAPTER 9 CYANOSIS			
Cyanosis, detecting hepatopulmonary syndrome	3.6 (2.2, 5.7)	0.6 (0.3, 1.2)	19-34
EBM BOX 9.1 CYANOSIS			
Central cyanosis	7.4 (1.5, 36.8)	0.2 (0.1, 0.5)	9-12

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APPENDIX TABLE I Likelihood Ratios, Confidence Intervals, and Pre-Test Probability—cont’d

Finding	Positive Likelihood Ratio (95% CI)	Negative Likelihood Ratio (95% CI)	Pre-Test Probability (Range)
EBM BOX 10.1 ANEMIA			
Pallor at any site	3.8 (2.6, 5.6)	0.5 (0.3, 0.6)	2-71
Facial pallor	3.8 (2.5, 5.8)	0.6 (0.5, 0.7)	39
Nailbed pallor	3.9 (0.8, 18.6)	0.5 (0.4, 0.7)	39-71
Palmar pallor	5.6 (1.1, 29.1)	0.4 (0.4, 0.5)	39-71
Palmar crease pallor	7.9 (1.8, 35.3)	0.9 (0.9, 1)	39
Conjunctival pallor	4.7 (1.9, 11.5)	0.6 (0.4, 0.9)	39-71
Tongue pallor	3.7 (2.5, 5.4)	0.6 (0.5, 0.7)	21
Conjunctival rim pallor present	16.7 (2.2, 125)	—	47
Conjunctival rim pallor borderline	2.3 (1.5, 3.5)	—	47
Conjunctival rim pallor absent	0.6 (0.5, 0.8)	—	47
EBM BOX 11.1 HYPOVOLEMIA			
Dry axilla	3 (1.6, 5.6)	0.6 (0.5, 0.9)	23-52
Dry mucous membranes of mouth and nose	3.1 (1.6, 5.8)	0.4 (0.2, 0.9)	33-77
Longitudinal furrows on tongue	2 (1, 4)	0.3 (0.1, 0.6)	77
Sunken eyes	3.7 (1.3, 11)	0.6 (0.4, 0.9)	52-79
Abnormal skin turgor	3.5 (2.7, 4.4)	0.3 (0.3, 0.4)	33
Confusion	10 (0.5, 223)	0.5 (0.4, 0.6)	33-77
Weakness	2.3 (0.6, 8.6)	0.7 (0.5, 1)	78
Speech unclear or rambling	3.1 (0.9, 11.1)	0.5 (0.3, 0.8)	80
CHAPTER 12 MALNUTRITION AND WEIGHT LOSS			
Alcoholism, detecting organic disease	4.5 (1.1, 18.9)	0.8 (0.7, 1)	55
Cigarette smoking, detecting organic cause	2.2 (1.1, 4.4)	0.6 (0.4, 0.9)	55
Prior psychiatric disease, detecting organic cause	0.2 (0.1, 0.5)	1.8 (1.3, 2.5)	55
Normal physical examination, detecting organic cause	0.4 (0.3, 0.6)	20.3 (2.9, 143)	55
Underestimation, predicting organic cause	5.4 (2, 14.5)	0.6 (0.5, 0.8)	50
Overestimation, predicting nonorganic cause	3.6 (2, 6.5)	0.4 (0.2, 0.6)	50
EBM BOX 12.1 MALNUTRITION AND COMPLICATIONS			
Weight loss >10%	1.4 (1.1, 1.8)	0.9 (0.9, 1)	13-51
Low body weight	2 (1.4, 2.9)	0.9 (0.8, 1)	13-40
Upper arm muscle circumference <85% predicted	2.5 (1.7, 3.6)	0.8 (0.7, 0.9)	13-40
Forearm muscle circumference <85% predicted	3.2 (2, 5.1)	0.8 (0.6, 0.9)	14-40

APPENDIX TABLE I Likelihood Ratios, Confidence Intervals, and Pre-Test Probability—cont'd

Finding	Positive Likelihood Ratio (95% CI)	Negative Likelihood Ratio (95% CI)	Pre-Test Probability (Range)
Reduced grip strength	2.5 (1.9, 3.3)	0.4 (0.3, 0.6)	13-59
CHAPTER 14 CUSHING SYNDROME			
Osteoporosis, detecting Cushing syndrome	8.6 (2.3, 32.6)	0.5 (0.3, 0.8)	25-69
Weight loss, detecting ectopic ACTH syndrome	20 (1.2, 341)	0.5 (0.2, 1.1)	24
Symptom duration < 18 months, detecting ectopic ACTH syndrome	15 (3.2, 71.4)	0.1 (0, 1)	23
EBM BOX 14.1 CUSHING SYNDROME			
Hypertension	2.3 (1.5, 3.7)	0.8 (0.6, 0.9)	25-56
Moon facies	1.6 (1.1, 2.5)	0.1 (0, 0.9)	58
Central obesity	3 (2, 4.4)	0.2 (0.1, 0.3)	25-56
Generalized obesity	0.1 (0, 0.2)	2.5 (2.1, 3.1)	25
BMI > 30 kg/m ²	0.4 (0.2, 0.7)	2.6 (1.3, 5.4)	58
Skinfold thickness < 1.8 mm	115.6 (7, 1854)	0.2 (0.1, 0.6)	17
Plethora	2.7 (2.1, 3.5)	0.3 (0.1, 0.5)	25
Hirsutism, in women	1.4 (0.9, 2.2)	0.8 (0.5, 1.2)	22-65
Ecchymoses	4.5 (1.8, 11.3)	0.6 (0.4, 0.7)	25-58
Red or blue striae	1.6 (1, 2.4)	0.8 (0.6, 0.9)	25-58
Acne	1.2 (0.4, 4.1)	0.9 (0.5, 1.7)	25-58
Proximal muscle weakness	2.6 (0.6, 10.7)	0.6 (0.3, 1.2)	25-58
Edema	1.8 (1.1, 3.1)	0.7 (0.6, 0.9)	25-57
CHAPTER 15 PULSE RATE AND CONTOUR			
Heart rate ≤50/min, predicting mortality if severe trauma	20.7 (17, 25.2)	0.8 (0.8, 0.9)	5
Pulsus paradoxus > 12 mm Hg, detecting cardiac tamponade	5.9 (2.4, 14.3)	0.03 (0, 0.2)	63
Carotid upstroke delayed, detecting severe aortic stenosis	3.5 (2.6, 4.6)	0.4 (0.2, 0.7)	5-69
Hyperkinetic pulse in patients with mitral stenosis, detecting additional valvular disease	14.2 (7.4, 27.2)	0.3 (0.2, 0.4)	35
EBM BOX 15.1 TACHYCARDIA			
Heart rate >90/min, predicting hospital mortality in trauma patients with hypotension	1.5 (1.4, 1.7)	0.2 (0.1, 0.5)	10
Heart rate >95/min, predicting hospital mortality in patients with septic shock	2 (1.3, 3.3)	0.1 (0, 0.5)	60

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APPENDIX TABLE I Likelihood Ratios, Confidence Intervals, and Pre-Test Probability—cont'd			
Finding	Positive Likelihood Ratio (95% CI)	Negative Likelihood Ratio (95% CI)	Pre-Test Probability (Range)
Heart rate > 100/min, predicting mortality in patients with pneumonia	2.1 (1.1, 3.8)	0.7 (0.5, 1)	31
Heart rate > 100/min, predicting hospital mortality in patients with myocardial infarction	3 (2.3, 4)	1 (0.9, 1)	2-9
Heart rate > 100/min, predicting active UGI hemorrhage	4.9 (3.2, 7.6)	0.3 (0.2, 0.5)	27
Heart rate > 100/min, predicting complications in patients with gallstone pancreatitis	6.8 (3.7, 12.5)	0.2 (0, 1)	7
Heart rate > 100/min, predicting hospital mortality in patients with pontine hemorrhage	25.4 (1.6, 396)	0.3 (0.2, 0.6)	55
EBM BOX 15.2 PULSUS PARADOXUS AND ASTHMA			
Pulsus paradoxus > 10 mm Hg, detecting severe asthma	2.7 (1.7, 4.3)	0.5 (0.4, 0.7)	36-77
Pulsus paradoxus > 20 mm Hg, detecting severe asthma	8.2 (1.7, 40.3)	0.8 (0.7, 0.9)	36-67
Pulsus paradoxus > 25 mm Hg, detecting severe asthma	22.6 (1.4, 364)	0.8 (0.8, 0.9)	77
EBM BOX 15.3 PULSES AND HYPOVOLEMIC SHOCK			
Carotid pulse present, detecting systolic BP ≥60 mm Hg	1.2 (0.9, 1.8)	0.2 (0, 2.1)	70
Femoral pulse present, detecting systolic BP ≥60 mm Hg	2.9 (1.1, 7.2)	0.1 (0, 0.5)	70
Radial pulse present, detecting systolic BP ≥60 mm Hg	4.7 (0.7, 31.3)	0.5 (0.3, 0.9)	70
CHAPTER 16 ABNORMALITIES OF PULSE RHYTHM			
Rapid regular pounding in neck, detecting atrioventricular nodal reentrant tachycardia	9.6 (1.4, 66.6)	0.5 (0.3, 0.8)	22-71
EBM BOX 16.1 AV DISSOCIATION AND VENTRICULAR TACHYCARDIA			
Varying arterial pulse, detecting AV dissociation of ventricular tachycardia	2.1 (1, 4.4)	0.5 (0.3, 1)	55
Intermittent cannon A waves in neck veins, detecting AV dissociation of ventricular tachycardia	3.8 (1.8, 8.2)	0.1 (0, 0.4)	55
Changing intensity S1, detecting AV dissociation of ventricular tachycardia	24.4 (1.5, 385)	0.4 (0.3, 0.7)	55

APPENDIX TABLE I Likelihood Ratios, Confidence Intervals, and Pre-Test Probability—cont'd

Finding	Positive Likelihood Ratio (95% CI)	Negative Likelihood Ratio (95% CI)	Pre-Test Probability (Range)
EBM BOX 16.2 ATRIAL FIBRILLATION			
Radial pulse not regular	4.6 (3.2, 6.4)	0.1 (0.1, 0.2)	5-30
Chaotic pulse	24.1 (15.2, 38)	0.5 (0.4, 0.6)	6
CHAPTER 17 BLOOD PRESSURE			
BP <90 mm Hg, detecting future adverse events if syncope	4.2 (3, 5.8)	0.9 (0.9, 0.9)	8-12
Interarm BP difference >20 mm Hg, detecting subclavian stenosis	89.1 (12.3, 643)	0.2 (0.1, 0.8)	7
Mediastinal widening on CXR, detecting aortic dissection	2 (1.2, 3.4)	0.3 (0.2, 0.4)	45-51
Systolic BP <100 mm Hg, detecting type A dissection	5 (1.8, 14)	0.9 (0.9, 1)	61
Murmur of aortic regurgitation, detecting type A dissection	5 (2.6, 9.8)	0.6 (0.5, 0.8)	43-91
Pulse deficit, detecting type A dissection	2.3 (1.6, 3.2)	0.9 (0.8, 1)	43-91
Findings of aortic coarctation, detecting coarctation	242 (89.3, 657)	0.2 (0.1, 0.4)	2
Proportional pulse pressure <0.25, detecting low cardiac index	6.9 (3, 15.8)	0.2 (0.1, 0.6)	50-64
Pulse pressure ≥80 mm Hg, detecting moderate-to-severe aortic regurgitation	10.9 (1.5, 77.1)	0.5 (0.2, 0.8)	42
Positive tourniquet test, detecting dengue infection	6.8 (2.4, 19.1)	0.6 (0.4, 0.7)	41-89
EBM BOX 17.1 HYPOTENSION AND PROGNOSIS			
Systolic BP <90 mm Hg, predicting mortality in intensive care patients	3.1 (1.9, 5.1)	0.5 (0.2, 1.3)	21-37
Systolic BP <90 mm Hg, predicting mortality in patients with bacteremia	4.9 (4.2, 5.7)	0.6 (0.2, 1.4)	5-13
Systolic BP <90 mm Hg, predicting mortality in patients with pneumonia	7.6 (3.8, 15.3)	0.8 (0.6, 0.9)	4-10
Systolic BP <80 mm Hg, predicting mortality in patients with acute myocardial infarction	15.5 (12.2, 20)	0.7 (0.7, 0.7)	18
Systolic BP ≤90 mm Hg, detecting adverse outcomes in hospitalized patients	4.7 (3.4, 6.5)	0.7 (0.7, 0.8)	49

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APPENDIX TABLE I Likelihood Ratios, Confidence Intervals, and Pre-Test Probability—cont'd			
Finding	Positive Likelihood Ratio (95% CI)	Negative Likelihood Ratio (95% CI)	Pre-Test Probability (Range)
Systolic BP ≤85 mm Hg, detecting adverse outcomes in hospitalized patients	9 (5.3, 15.2)	0.8 (0.7, 0.8)	49
Systolic BP ≤80 mm Hg, detecting adverse outcomes in hospitalized patients	16.7 (7.6, 36.4)	0.8 (0.8, 0.8)	49
EBM BOX 17.2 AORTIC DISSECTION			
Pulse deficit	4.2 (1.6, 10.8)	0.8 (0.6, 0.9)	23-76
Aortic regurgitation murmur	1.5 (1.1, 2)	0.9 (0.8, 1)	23-76
Focal neurologic signs	6.4 (0.6, 66.2)	0.9 (0.8, 0.9)	23-51
0 predictors	0.1 (0, 0.2)	—	51
1 predictor	0.5 (0.4, 0.8)	—	51
2 predictors	5.3 (3, 9.4)	—	51
3 predictors	65.8 (4.1, 1062)	—	51
EBM BOX 17.3 SYSTOLIC BLOOD PRESSURE AND IMPAIRED CONSCIOUSNESS			
Systolic BP ≥160 mm Hg in patients with impaired consciousness, detecting structural brain lesions	7.3 (3.6, 14.6)	0.6 (0.4, 0.8)	46-59
CHAPTER 18 TEMPERATURE			
WBC > 15,000, detecting bacteremia	1.6 (1.2, 2.2)	0.8 (0.8, 0.9)	9-37
Band count > 1500, detecting bacteremia	2.6 (1.3, 5.1)	0.7 (0.6, 0.9)	8-19
Low food consumption, detecting bacteremia	2.3 (2, 2.7)	0.3 (0.1, 0.4)	9
High food consumption, detecting bacteremia	0.2 (0.1, 0.4)	1.7 (1.5, 1.8)	9
Chills, detecting bacteremia	1.9 (1.7, 2.1)	0.7 (0.6, 0.8)	7-37
Shaking chills, detecting bacteremia	3.7 (2.8, 5)	0.3 (0.1, 1.3)	8-15
Stepladder pattern of fever, detecting enteric fever	177 (11, 2842)	0.5 (0.4, 0.6)	38
Pulse ≤90/min, detecting dengue infection	3.3 (1.8, 5.9)	0.4 (0.3, 0.6)	50
Pulse ≤80/min, detecting dengue infection	5.3 (1.7, 17.2)	0.7 (0.6, 0.9)	50
Splenomegaly in FUO, predicting diagnostic bone marrow examination	2.9 (1.9, 4.4)	0.7 (0.5, 0.8)	24-45
Lymphadenopathy in FUO, predicting diagnostic bone marrow examination	1.9 (1.1, 3.2)	0.9 (0.8, 1)	24-45

APPENDIX TABLE I Likelihood Ratios, Confidence Intervals, and Pre-Test Probability—cont'd

Finding	Positive Likelihood Ratio (95% CI)	Negative Likelihood Ratio (95% CI)	Pre-Test Probability (Range)
EBM BOX 18.1 TEMPERATURE, DETECTING INFECTION			
Rectal temperature >37.8°C	6.1 (3.9, 9.6)	0.6 (0.5, 0.7)	25
Forehead temperature >37.9°C	4.2 (2.8, 6.5)	0.7 (0.6, 0.8)	25
Tympanic temperature >37.5°C	8.5 (4.7, 15.4)	0.7 (0.6, 0.8)	25
EBM BOX 18.2 DETECTION OF FEVER			
Patient's report of fever	5.3 (1.4, 19.2)	0.2 (0.1, 0.5)	6-45
Patient's forehead abnormally warm	2.8 (2.4, 3.3)	0.3 (0.2, 0.5)	24-49
EBM BOX 18.3 DETECTION OF BACTEREMIA			
Age 50 years or more	1.4 (1.2, 1.6)	0.3 (0.1, 0.8)	16-19
Renal failure	4.6 (2.6, 8.1)	0.8 (0.7, 0.9)	14-21
Hospitalization for trauma	3 (2.4, 3.8)	0.7 (0.3, 1.3)	16-18
Intravenous drug use	1.8 (0.8, 4.1)	1.0 (1.0, 1.0)	7
Previous stroke	2.8 (1.2, 6.2)	0.9 (0.8, 1)	21
Diabetes mellitus	1.6 (1.2, 2.1)	0.9 (0.9, 1)	7-37
Poor functional performance	3.6 (2.2, 5.9)	0.6 (0.4, 0.8)	14-21
Rapidly fatal disease (<1 month)	2.7 (1.4, 5.2)	0.9 (0.9, 1)	7-19
Indwelling urinary catheter present	2.7 (1.5, 4.7)	0.9 (0.8, 1)	7-37
Central intravenous line present	2.4 (1.6, 3.5)	0.9 (0.9, 1)	7-32
Temperature ≥38.5°C	1.2 (1.1, 1.4)	0.7 (0.6, 0.9)	8-19
Tachycardia	1.2 (1.1, 1.4)	0.7 (0.6, 0.8)	9-37
Respiratory rate >20/min	0.9 (0.8, 1.1)	1.2 (0.8, 1.7)	37
Hypotension	2.3 (1.9, 2.9)	0.9 (0.8, 0.9)	7-37
Acute abdomen	1.7 (1.3, 2.3)	1 (0.9, 1)	7-32
Confusion or depressed sensorium	1.6 (1.3, 1.8)	0.9 (0.9, 1)	8-37
EBM BOX 18.4 EXTREMES OF TEMPERATURE			
Hyperthermia, predicting death if pontine hemorrhage	23.7 (1.5, 371)	0.4 (0.2, 0.6)	55
Hypothermia, predicting death if congestive heart failure	6.7 (2.7, 16.9)	0.7 (0.5, 1)	6
Hypothermia, predicting death if pneumonia	3.5 (1.1, 10.9)	0.8 (0.5, 1.2)	4-9
Hypothermia, predicting death if SIRS	3.3 (1.1, 10)	0.9 (0.8, 1)	43
CHAPTER 19 RESPIRATORY RATE AND PATTERNS			
Respirations ≤12/min if altered mental status, predicting response to naloxone	15.5 (9.6, 25.1)	0.2 (0.1, 0.5)	6

Continued

APPENDIX TABLE I Likelihood Ratios, Confidence Intervals, and Pre-Test Probability—cont'd

Finding	Positive Likelihood Ratio (95% CI)	Negative Likelihood Ratio (95% CI)	Pre-Test Probability (Range)
Kussmaul respirations, detecting severe metabolic acidosis in patients with malaria	4.8 (3.4, 6.7)	0.1 (0.1, 0.2)	51
Asynchronous breathing, predicting need for intubation or hospital mortality in hospitalized patients with COPD	3.2 (1.3, 7.8)	0.5 (0.2, 1)	31
Paradoxical abdominal movements, detecting diaphragmatic weakness	3.2 (1.7, 5.9)	0.1 (0, 1.1)	27
Orthopnea, detecting ejection fraction <50%	2.7 (1.5, 4.9)	0.04 (0, 0.7)	46
EBM BOX 19.1 TACHYPNEA			
Respirations >20/min, predicting ischemic bowel or obstruction if pneumatosis	16.4 (2.3, 118.9)	0.7 (0.6, 0.9)	6-17
Respirations >24/min, predicting failure of weaning from mechanical ventilation	2.9 (1.2, 7.1)	0.1 (0, 1.4)	41
Respirations >27/min, predicting cardiopulmonary arrest in medical inpatients	3.1 (1.9, 5.1)	0.6 (0.4, 0.7)	39
Respirations >28/min, detecting pneumonia in outpatients with cough and fever	2.7 (1.4, 5.1)	0.9 (0.8, 0.9)	9-38
Respirations >30/min, predicting hospital mortality in patients with pneumonia	2.1 (1.7, 2.6)	0.6 (0.5, 0.8)	6-17
EBM BOX 19.2 CHEYNE STOKES RESPIRATIONS			
Cheyne-Stokes respirations, detecting EF <40% (all patients)	5.4 (3.2, 9.2)	0.7 (0.6, 0.8)	20
Cheyne-Stokes respirations, detecting EF <40% (≤80 years old)	8.1 (4, 16.3)	0.7 (0.6, 0.8)	21
Cheyne-Stokes respirations, detecting EF <40% (>80 years old)	2.7 (1.1, 6.6)	0.7 (0.4, 1.1)	17
EBM BOX 20.1 PULSE OXIMETRY			
O ₂ sat <90%, predicting hospital mortality	4.5 (1.9, 10.5)	0.8 (0.7, 0.9)	6-15
O ₂ sat <96%, detecting hepatopulmonary syndrome in patients with chronic liver disease	6.7 (2.6, 17.1)	0.6 (0.5, 0.8)	32

APPENDIX TABLE I Likelihood Ratios, Confidence Intervals, and Pre-Test Probability—cont'd

Finding	Positive Likelihood Ratio (95% CI)	Negative Likelihood Ratio (95% CI)	Pre-Test Probability (Range)
O ₂ sat <95%, detecting pneumonia in outpatients with cough and fever	3.1 (2.6, 3.7)	0.7 (0.5, 0.8)	11-13
CHAPTER 21 THE PUPILS			
Marcus Gunn pupil, detecting abnormal retinal fiber layer in glaucoma	4.2 (2.2, 7.8)	0.1 (0, 0.7)	27
Marcus Gunn pupil, detecting abnormal retinal fiber layer in multiple sclerosis	3.6 (2.1, 6)	0.6 (0.4, 0.9)	9
Both pupils nonreactive to light, detecting unfavorable outcome after craniotomy for subdural hematoma	3.4 (1.5, 7.6)	0.4 (0.4, 0.5)	45-53
Pinpoint pupils, detecting response to naloxone if abnormal mental status (opiate intoxication)	8.5 (6.1, 11.9)	0.1 (0, 0.4)	6
EBM BOX 21.1 PUPILS AND ANISOCORIA			
Anisocoria >1 mm, detecting intracranial structural lesion in patients with coma	9 (2.8, 28.8)	0.6 (0.5, 0.8)	40
Absent light reflex in at least one eye, detecting intracranial structural lesion in patients with coma	3.6 (2.3, 5.6)	0.2 (0.1, 0.4)	40
Anisocoria and third nerve palsy, detecting intracranial hemorrhage in patients with stroke	3.2 (1.5, 7.1)	0.7 (0.6, 0.9)	48
Anisocoria or abnormal light reaction, detecting intracranial aneurysm in patients with third nerve palsy	2.4 (1.9, 3.1)	0.2 (0.1, 0.4)	17-38
Anisocoria (≥1 mm difference) in red eye, with smaller pupil in red eye, detecting serious disease	6.5 (2.6, 16.3)	0.8 (0.8, 0.9)	47
Horner syndrome, detecting posterior circulation disease if stroke	72 (4.3, 1212.9)	1 (0.9, 1)	26
EBM BOX 21.2 HORNER SYNDROME, EYEDROP TESTS			
Post topical cocaine anisocoria >1 mm, detecting Horner syndrome	96.8 (6.1, 1527)	0.1 (0, 0.1)	68
Reversal of anisocoria after apraclonidine, detecting Horner syndrome	14 (2.1, 92.3)	0.1 (0, 0.4)	50-69

Continued

APPENDIX TABLE I Likelihood Ratios, Confidence Intervals, and Pre-Test Probability—cont'd			
Finding	Positive Likelihood Ratio (95% CI)	Negative Likelihood Ratio (95% CI)	Pre-Test Probability (Range)
Small pupil dilates with hydroxyamphetamine, detecting first/second neuron lesion in patients with Horner syndrome	9.2 (2, 43.6)	0.2 (0.1, 0.3)	45-52
Small pupil fails to dilate with topical phenylephrine, detecting first/second neuron lesion in patients with Horner syndrome	4.2 (1.3, 13.4)	0.2 (0, 2.1)	21
Asymmetric facial sweating, detecting first /second neuron lesion in patients with Horner syndrome	2.4 (0.9, 6.1)	0.6 (0.4, 0.9)	63
EBM BOX 22.1 DIABETIC RETINOPATHY			
Abnormal visual acuity 20/40 or worse	1.5 (1.3, 1.7)	0.9 (0.9, 1)	2-24
Direct ophthalmoscopy, nondilated pupils	6.2 (2.5, 14.9)	0.5 (0.3, 0.8)	21
Direct ophthalmoscopy, dilated pupils, general providers	9.4 (6.2, 14.3)	0.4 (0.3, 0.5)	5-15
Direct ophthalmoscopy, dilated pupils, specialists	25.5 (8.2, 79.1)	0.3 (0.2, 0.5)	5-15
Nonmydriatic three-view digital photographs	31.3 (9.8, 99.8)	0.2 (0.1, 0.4)	8-28
CHAPTER 23 THE RED EYE			
Matting of both eyes, bacterial conjunctivitis	3.6 (1.9, 6.5)	0.7 (0.6, 0.9)	32
Absence of eye matting, bacterial conjunctivitis	0.3 (0.1, 0.8)	1.3 (1.1, 1.4)	32
Clinical diagnosis bacterial conjunctivitis	5.3 (4.2, 6.8)	0.2 (0.1, 0.2)	43
Clinical diagnosis viral conjunctivitis	3.5 (2.8, 4.4)	0.4 (0.3, 0.5)	42
Clinical diagnosis allergic conjunctivitis	16.4 (11.8, 22.6)	0.01 (0, 0.2)	8
EBM BOX 23.1 SERIOUS EYE DISEASE			
Direct photophobia	8.3 (2.7, 25.9)	0.4 (0.3, 0.5)	28-59
Indirect photophobia	28.8 (1.8, 459.4)	0.6 (0.4, 0.7)	59
Finger-to-nose convergence test	21.4 (12, 38.3)	0.3 (0.1, 0.6)	4
Anisocoria	6.5 (2.6, 16.3)	0.8 (0.8, 0.9)	47
EBM BOX 23.2 BACTERIAL CONJUNCTIVITIS			
Redness, periphery only	0.7 (0.4, 1.1)	1.2 (1, 1.5)	32
Redness observed at 20 feet	1.5 (1.1, 1.9)	0.2 (0, 0.8)	42

APPENDIX TABLE I Likelihood Ratios, Confidence Intervals, and Pre-Test Probability—cont'd

Finding	Positive Likelihood Ratio (95% CI)	Negative Likelihood Ratio (95% CI)	Pre-Test Probability (Range)
Redness obscures tarsal vessels completely	4.6 (1.2, 17.1)	0.7 (0.5, 1)	42
No discharge	0.4 (0.2, 0.8)	—	40-42
Watery discharge	0.4 (0.2, 1.2)	—	40-42
Mucous discharge	1.8 (0.9, 3.8)	—	40-42
Purulent discharge	3.9 (1.7, 9.1)	—	40-42
Follicular conjunctivitis	1 (0.5, 1.7)	1 (0.6, 1.9)	40
Papillary conjunctivitis	4.4 (0.8, 25.5)	0.8 (0.6, 1.1)	40
Preauricular adenopathy	0.6 (0.1, 4)	1.1 (0.8, 1.6)	40-42
Rietveld score, +4 or more	6.6 (3, 14.6)	—	32
Rietveld score, +1 to +3	0.8 (0.6, 1.1)	—	32
Rietveld score, -3 to 0	0.4 (0.2, 0.8)	—	32
EBM BOX 24.1 HEARING TESTS			
Abnormal whispered voice test	6 (4.4, 8.2)	0.03 (0, 0.3)	43-64
Cannot hear strong finger rub	355 (22, 5685)	0.4 (0.3, 0.5)	34
Cannot hear faint finger rub	3.9 (3.2, 4.8)	0.02 (0, 0.1)	34
Cannot hear ticking watch	106 (6.6, 1696)	0.6 (0.5, 0.7)	44
Rinne test	16.8 (13.8, 20)	0.2 (0.1, 0.8)	6-46
Weber test lateralized to good ear, detecting neurosensory loss	2.7 (1.2, 6.4)	0.5 (0.3, 1.1)	30
Weber test lateralized to bad ear, detecting conductive loss	6.4 (1, 43.3)	0.5 (0.3, 0.8)	70
CHAPTER 25 THYROID DISEASE			
Half relaxation time >380 ms, detecting hypothyroidism	18.7 (13.3, 26)	0.1 (0, 0.2)	9-15
EBM BOX 25.1 GOITER			
No goiter by palpation or inspection	0.4 (0.3, 0.5)	—	37-79
Goiter by palpation, visible only after neck extension	0.9 (0.4, 2.1)	—	52
Goiter by palpation and inspection with neck in normal position	26.3 (5.2, 132)	—	37-65
EBM BOX 25.2 GOITER AND THYROID NODULES, PREDICTING CARCINOMA			
Goiter, cervical adenopathy	15.4 (4.8, 49)	0.6 (0.4, 0.7)	32
Goiter, vocal cord paralysis	11.3 (2.2, 59.3)	0.7 (0.6, 0.9)	12-27
Goiter, fixation to tissues	10.5 (4.7, 23.5)	0.4 (0.3, 0.6)	32
Goiter nodular (vs. diffuse)	1.5 (1.2, 1.9)	0.4 (0.2, 0.8)	31
Goiter, pyramidal lobe present	0.2 (0, 1.7)	1.1 (1, 1.2)	31

Continued

APPENDIX TABLE I Likelihood Ratios, Confidence Intervals, and Pre-Test Probability—cont'd

Finding	Positive Likelihood Ratio (95% CI)	Negative Likelihood Ratio (95% CI)	Pre-Test Probability (Range)
Thyroid nodule, vocal cord paralysis	17.9 (3.9, 81.1)	0.9 (0.9, 1)	15-23
Thyroid nodule, fixation to surrounding tissues	7.8 (3.3, 18.3)	0.8 (0.6, 1)	23-46
Thyroid nodule, cervical adenopathy	7.2 (4.3, 12)	0.8 (0.7, 0.9)	15-23
Thyroid nodule, ≥4 cm diameter	1.9 (1.4, 2.7)	0.5 (0.4, 0.7)	46
Thyroid nodule, very firm nodule	3.3 (0.2, 52.1)	1 (0.9, 1)	23
EBM BOX 25.3 HYPOTHYROIDISM			
Cool and dry skin	4.7 (3.1, 7.1)	0.9 (0.8, 0.9)	12
Coarse skin	3.4 (1.4, 8)	0.7 (0.5, 0.9)	18
Cold palms	1.6 (1, 2.7)	0.8 (0.6, 1.1)	18
Dry palms	1.5 (1, 2.4)	0.8 (0.6, 1.1)	18
Puffiness of face	1.7 (0.7, 4.2)	0.6 (0.4, 0.8)	18
Puffiness of wrists	2.9 (1.7, 4.9)	0.7 (0.5, 0.9)	18
Hair loss of eyebrows	1.9 (1.1, 3.6)	0.8 (0.7, 1)	18
Pretibial edema	1.1 (0.9, 1.5)	0.7 (0.3, 1.6)	18
Hypothyroid speech	5.4 (2.7, 10.7)	0.7 (0.5, 0.9)	18
Slow pulse rate	4.2 (3.2, 5.4)	0.7 (0.7, 0.8)	12-20
Enlarged thyroid	2.8 (2.3, 3.4)	0.6 (0.6, 0.7)	12
Delayed ankle reflex	3.4 (1.8, 6.4)	0.6 (0.4, 0.9)	18
Slow movements	1 (0.8, 1.2)	1 (0.3, 3.2)	18
Billewicz score < -15 points	0.1 (0, 0.2)	—	30-37
Billewicz score -15 to +29 points	0.9 (0.4, 2.1)	—	30-37
Billewicz score +30 points or more	18.8 (1.2, 301)	—	30-37
EBM BOX 25.4 HYPERTHYROIDISM			
Pulse rate ≥90/min	4.5 (3.9, 5.2)	0.2 (0.2, 0.3)	50
Skin moist and warm	6.8 (5, 9.2)	0.7 (0.7, 0.7)	50
Thyroid enlargement	2.3 (2.1, 2.5)	0.1 (0.1, 0.2)	50
Eyelid retraction	33.2 (17.2, 64)	0.7 (0.6, 0.7)	50
Eyelid lag	18.6 (9.6, 36.1)	0.8 (0.8, 0.8)	50
Fine finger tremor	11.5 (8.8, 14.9)	0.3 (0.3, 0.4)	50
Wayne index < 11 points	0.04 (0, 0.3)	—	32-43
Wayne index 11 to 19 points	1.2 (0.7, 2)	—	32-43
Wayne index ≥20 points	18.2 (2.9, 114)	—	32-43
CHAPTER 26 MENINGES			
Lack of focal neurologic findings, detecting subarachnoid hemorrhage in stroke	5.9 (3.5, 9.9)	0.4 (0.2, 0.7)	11

APPENDIX TABLE I Likelihood Ratios, Confidence Intervals, and Pre-Test Probability—cont'd

Finding	Positive Likelihood Ratio (95% CI)	Negative Likelihood Ratio (95% CI)	Pre-Test Probability (Range)
EBM BOX 26.1 MENINGITIS			
Nuchal rigidity, detecting CSF WBC > 100/μL	1.5 (1.1, 1.9)	0.9 (0.7, 1)	7-35
Kernig sign, detecting CSF WBC > 100/μL	2.5 (1.3, 4.9)	0.9 (0.9, 1)	7-35
Brudzinski sign, detecting CSF WBC > 100/μL	2.2 (1.1, 4.6)	0.9 (0.9, 1)	7-35
EBM BOX 26.2 INTRACRANIAL HEMORRHAGE			
Neck stiffness, detecting subarachnoid hemorrhage if sudden headache	7.1 (4.9, 10.5)	0.7 (0.7, 0.8)	6-7
Neck stiffness, detecting intracranial hemorrhage if stroke	5.4 (2.5, 11.3)	0.7 (0.7, 0.9)	18-59
CHAPTER 27 LYMPHADENOPATHY			
Generalized pruritus, detecting serious disease	4.9 (1.8, 13.1)	0.9 (0.9, 1)	26
ENT symptoms, detecting serious disease	0.2 (0.1, 0.4)	1.4 (1.2, 1.6)	26-71
Epitrochlear nodes > 0.5 cm, detecting HIV infection	4.5 (3.1, 6.7)	0.2 (0.1, 0.3)	56
Axillary adenopathy if tuberculosis, detecting HIV infection	4.9 (2.2, 11.2)	0.7 (0.5, 0.9)	9-56
Lymphadenopathy, indicating bone marrow examination diagnostic if FUO	1.9 (1.1, 3.2)	0.9 (0.8, 1)	24-45
Axillary adenopathy, detecting metastases if breast cancer	9.3 (2.3, 37.6)	0.7 (0.7, 0.8)	25-40
EBM BOX 27.1 LYMPHADENOPATHY			
Male sex	1.3 (1.1, 1.6)	0.8 (0.7, 0.9)	26-60
Age ≥ 40 years	2.4 (1.7, 3.5)	0.4 (0.3, 0.6)	26-63
Weight loss	3.4 (2.2, 5.4)	0.8 (0.8, 0.9)	26-53
Fever	0.7 (0.5, 1)	1.1 (1, 1.2)	26-53
Head and neck nodes (not supraclavicular)	0.9 (0.8, 1.1)	1.1 (0.9, 1.2)	17-70
Supraclavicular nodes	3.2 (2.3, 4.3)	0.8 (0.7, 0.9)	17-70
Axillary nodes	0.8 (0.6, 0.9)	1.1 (1, 1.1)	17-70
Inguinal nodes	0.6 (0.4, 0.7)	1.1 (1, 1.1)	17-70
Epitrochlear nodes	0.7 (0.1, 7.6)	1 (1, 1.1)	41
Generalized lymphadenopathy	1.3 (0.6, 2.9)	1 (0.7, 1.4)	17-60
Node size < 4 cm ²	0.4 (0.3, 0.7)	—	26
Node size 4-8.99 cm ²	2 (0.4, 9.2)	—	26
Node size ≥ 9 cm ²	8.4 (2.1, 32.8)	—	26
Hard texture	3.2 (2.4, 4.3)	0.6 (0.4, 0.7)	26

Continued

APPENDIX TABLE I Likelihood Ratios, Confidence Intervals, and Pre-Test Probability—cont'd			
Finding	Positive Likelihood Ratio (95% CI)	Negative Likelihood Ratio (95% CI)	Pre-Test Probability (Range)
Lymph node tenderness	0.4 (0.3, 0.6)	1.3 (1.1, 1.5)	26-53
Fixed lymph node	10.9 (2, 59.2)	0.7 (0.3, 1.3)	26-53
Rash	0.6 (0.3, 1.4)	1 (1, 1.1)	26-41
Palpable spleen	1.2 (0.6, 2.5)	1 (0.9, 1)	26-41
Palpable liver	1.2 (0.7, 1.9)	1 (0.9, 1.1)	26-41
Score −3 or less	0.04 (0, 0.2)	—	24-26
Score −2 or −1	0.1 (0, 0.3)	—	24-26
Score 0 to 4	1.1 (0.5, 2.3)	—	24-26
Score 5 or 6	5.1 (2.9, 8.8)	—	24-26
Score 7 or more	21.9 (2.7, 179)	—	24-26
CHAPTER 28 INSPECTION OF THE CHEST			
Schamroth sign positive, detecting interphalangeal ratio >1	8 (5.1, 12.5)	0.2 (0.1, 0.3)	38
EBM BOX 28.1 CLUBBING			
Finger clubbing, detecting hypoxemia	3.2 (1.7, 6.1)	0.1 (0.1, 0.3)	75
Finger clubbing, detecting endocarditis	5.1 (2.9, 9.2)	0.9 (0.9, 1)	20
Finger clubbing, detecting hepatopulmonary syndrome	4 (2.2, 7.1)	0.5 (0.4, 0.8)	14-34
EBM BOX 28.2 INSPECTION OF THE CHEST			
Barrel chest, detecting chronic obstructive disease	1.5 (1.2, 2)	0.6 (0.4, 0.8)	49
AP/L chest diameter ratio ≥0.9, detecting chronic obstructive disease	2 (1.1, 3.3)	0.8 (0.7, 1)	49
Pursed-lip breathing, detecting chronic obstructive disease	2.7 (1.8, 4)	0.5 (0.4, 0.7)	49
Scalene/sternomastoid muscle use, detecting chronic obstructive disease	3.3 (1.8, 5.9)	0.7 (0.6, 0.8)	49
Accessory muscle use in patients with ALS, detecting respiratory neuromuscular weakness	4.9 (0.4, 61.7)	0.2 (0.1, 0.6)	92
Accessory muscle use, detecting pulmonary embolism	1.5 (0.6, 3.6)	0.9 (0.8, 1.1)	21
EBM BOX 29.1 PALPATION OF THE CHEST			
Asymmetric chest expansion, detecting pneumonia	44.1 (2.1, 905)	1 (0.9, 1)	10
Asymmetric chest expansion, detecting pleural effusion	8.1 (5.2, 12.7)	0.3 (0.2, 0.4)	21
Asymmetric chest expansion, detecting right mainstem bronchus intubation	15.8 (5, 49.6)	0.6 (0.4, 0.8)	5-50

APPENDIX TABLE I Likelihood Ratios, Confidence Intervals, and Pre-Test Probability—cont'd

Finding	Positive Likelihood Ratio (95% CI)	Negative Likelihood Ratio (95% CI)	Pre-Test Probability (Range)
Diminished tactile fremitus, detecting pleural effusion	5.7 (4, 8)	0.2 (0.1, 0.4)	20
Chest wall tenderness, detecting pneumonia	1.2 (0.3, 5.3)	1 (0.9, 1.1)	16
Chest wall tenderness, detecting pulmonary embolism	0.8 (0.6, 1.1)	1.1 (1, 1.1)	21-23
Chest wall tenderness, detecting coronary artery disease	0.8 (0.7, 0.9)	1.1 (1, 1.3)	44-62
Chest wall tenderness, detecting myocardial infarction	0.3 (0.2, 0.4)	1.3 (1.1, 1.4)	12-17
EBM BOX 29.2 PERCUSSION OF THE CHEST			
Percussion dullness, detecting pneumonia	3 (1.7, 5.2)	0.9 (0.8, 1)	3-38
Percussion dullness, detecting chest radiograph abnormality	3 (1.4, 6.3)	0.9 (0.9, 1)	26-46
Percussion dullness, detecting pleural effusion	4.8 (3.6, 6.4)	0.1 (0.1, 0.3)	21
Hyperresonance upper right anterior chest, detecting chronic obstructive disease	7.3 (3.6, 14.9)	0.8 (0.7, 0.9)	16-40
Reduced diaphragm excursion, detecting chronic airflow obstruction	5.3 (0.8, 35)	0.9 (0.7, 1.1)	16
Auscultatory percussion abnormal, detecting chest radiograph abnormality	1.7 (1, 3)	0.8 (0.6, 1.1)	26-46
Auscultatory percussion abnormal, detecting pleural effusion	8.3 (1.8, 38.7)	0.2 (0, 1.6)	21-40
CHAPTER 30 AUSCULTATION OF THE LUNGS			
Any crackles, predicting 30-day mortality in myocardial infarction	4.5 (3.9, 5.3)	0.7 (0.6, 0.8)	4
EBM BOX 30.1 BREATH SOUNDS AND VOCAL RESONANCE			
Breath sound score ≤ 9	10.2 (4.6, 22.7)	—	19-56
Breath sound score 10-12	3.6 (1.4, 9.5)	—	19-56
Breath sound score 13-15	0.7 (0.3, 1.5)	—	19-56
Breath sound score ≥ 16	0.1 (0, 0.3)	—	19-56
Diminished or absent breath sounds, detecting pleural effusion in hospitalized patients	5.2 (3.8, 7.1)	0.1 (0.1, 0.3)	21
Diminished breath sounds, detecting obstructive lung disease	3.5 (2.1, 5.6)	0.5 (0.4, 0.7)	15-49

Continued

APPENDIX TABLE I Likelihood Ratios, Confidence Intervals, and Pre-Test Probability—cont'd			
Finding	Positive Likelihood Ratio (95% CI)	Negative Likelihood Ratio (95% CI)	Pre-Test Probability (Range)
Diminished breath sounds, detecting underlying pleural effusion in mechanically ventilated patients	4.3 (2.8, 6.5)	0.6 (0.5, 0.8)	26
Diminished breath sounds, detecting asthma during methacholine challenge	4.2 (1.9, 9.5)	0.3 (0.1, 0.6)	50
Diminished breath sounds, detecting pneumonia in patients with cough and fever	2.2 (1.8, 2.7)	0.8 (0.8, 0.9)	5-41
Asymmetric breath sounds, detecting endobronchial intubation	18.8 (7.4, 47.5)	0.5 (0.3, 0.9)	5-50
Bronchial breath sounds, detecting pneumonia in patients with cough and fever	3.3 (2, 5.6)	0.9 (0.8, 1)	14
Egophony, detecting pneumonia in patients with cough and fever	4.1 (2.1, 7.8)	0.9 (0.9, 1)	3-38
Reduced vocal fremitus, detecting pleural effusion in hospitalized patients	6.5 (4.4, 9.6)	0.3 (0.2, 0.4)	20
EBM BOX 30.2 CRACKLES AND WHEEZES			
Crackles, detecting pulmonary fibrosis in asbestos workers	5.9 (2, 17.2)	0.2 (0.1, 0.5)	58
Crackles, detecting elevated left atrial pressure in patients with cardiomyopathy	2.1 (1.2, 3.8)	0.8 (0.7, 1)	54-86
Crackles, detecting myocardial infarction in patients with chest pain	2.1 (1.6, 2.8)	0.8 (0.7, 1)	6-12
Crackles, detecting pneumonia in patients with cough and fever	2.3 (1.4, 3.7)	0.8 (0.7, 0.9)	3-41
Early inspiratory crackles, detecting airway obstruction in patients with crackles	14.6 (3, 70)	0.4 (0.1, 1.4)	15-55
Early inspiratory crackles, detecting severe disease in patients with chronic airflow obstruction	20.8 (3, 142.2)	0.1 (0, 0.4)	48
Unforced wheezing, detecting chronic airflow obstruction	2.6 (1.7, 3.9)	0.8 (0.7, 0.9)	13-83
Wheezing, detecting pneumonia in patients with cough and fever	0.8 (0.7, 0.9)	1.1 (1, 1.1)	5-41

APPENDIX TABLE 1 Likelihood Ratios, Confidence Intervals, and Pre-Test Probability—cont'd

Finding	Positive Likelihood Ratio (95% CI)	Negative Likelihood Ratio (95% CI)	Pre-Test Probability (Range)
Wheezing, detecting pulmonary embolism	0.4 (0.1, 0.97)	1.1 (1, 1.2)	23-40
Wheezing during methacholine challenge testing, detecting asthma	6 (1.5, 24.3)	0.6 (0.4, 0.9)	50
Pleural rub, detecting pulmonary embolism	1.4 (0.6, 3.1)	1 (1, 1)	21-23
Pleural rub, detecting pleural effusion	3.9 (0.8, 18.7)	1 (0.9, 1)	21
EBM BOX 31.1 ANCILLARY TESTS			
Forced expiratory time <3 s, detecting chronic obstruction	0.2 (0.1, 0.3)	—	55-71
Forced expiratory time 3-9 s, detecting chronic obstruction	1.3 (0.5, 2.9)	—	55-71
Forced expiratory time >9 s, detecting chronic obstruction	4.1 (2.6, 6.4)	—	55-71
Unable to blow out the match, detecting FEV1 ≤1.6 L	9.6 (5.5, 16.6)	0.2 (0.1, 0.8)	37-56
CHAPTER 32 PNEUMONIA			
CRB-65 0, predicting mortality	0.1 (0.1, 0.3)	1.4 (1.2, 1.6)	4-13
CRB 2 or 3, predicting mortality	5 (3.3, 7.5)	0.7 (0.6, 0.8)	4-10
EBM BOX 32.1 PNEUMONIA			
Cachexia	4 (1.7, 9.6)	0.9 (0.8, 1)	3
Abnormal mental status	1.9 (1.2, 3)	0.9 (0.9, 1)	14-38
Pulse >100/min	1.8 (1.6, 2.1)	0.8 (0.7, 0.9)	3-50
Temperature >37.8°C	2.2 (1.8, 2.8)	0.7 (0.7, 0.8)	3-51
Respiratory rate >28/min	2.7 (1.4, 5.1)	0.9 (0.8, 0.9)	9-38
Oxygen saturation <95%	3.1 (2.6, 3.7)	0.7 (0.5, 0.8)	11-13
All vital signs normal	0.3 (0.2, 0.5)	2.2 (1.4, 3.4)	7-50
Asymmetric chest expansion	44.1 (2.1, 905)	1 (0.9, 1)	10
Chest wall tenderness	1.2 (0.3, 5.3)	1 (0.9, 1.1)	16
Percussion dullness	3 (1.7, 5.2)	0.9 (0.8, 1)	3-38
Diminished breath sounds	2.2 (1.8, 2.7)	0.8 (0.8, 0.9)	5-41
Bronchial breath sounds	3.3 (2, 5.6)	0.9 (0.8, 1)	14
Egophony	4.1 (2.1, 7.8)	0.9 (0.9, 1)	3-38
Crackles	2.3 (1.4, 3.7)	0.8 (0.7, 0.9)	3-41
Wheezing	0.8 (0.7, 0.9)	1.1 (1, 1.1)	5-38
0 or 1 finding	0.3 (0.2, 0.4)	—	7-35
2 or 3 findings	1 (0.9, 1.2)	—	15-35
4 or 5 findings	8.2 (5.8, 11.5)	—	15-35

Continued

APPENDIX TABLE I Likelihood Ratios, Confidence Intervals, and Pre-Test Probability—cont'd

Finding	Positive Likelihood Ratio (95% CI)	Negative Likelihood Ratio (95% CI)	Pre-Test Probability (Range)
EBM BOX 32.2: PNEUMONIA AND MORTALITY			
Abnormal mental status	2.7 (2.1, 3.4)	0.6 (0.5, 0.7)	8-31
Heart rate > 100/min	2.1 (1.1, 3.8)	0.7 (0.5, 1)	31
Systolic BP <90 mm Hg	7.6 (3.8, 15.3)	0.8 (0.6, 0.9)	4-10
Hypothermia	3.5 (1.1, 10.9)	0.8 (0.5, 1.2)	4-9
Respiratory rate ≥30/min	2.1 (1.7, 2.6)	0.6 (0.5, 0.8)	6-17
Oxygen saturation <90%	2.8 (1.4, 5.8)	0.8 (0.6, 1)	1-10
CURB-65 0	0.2 (0.1, 0.3)	—	1-17
CURB-65 1	0.5 (0.4, 0.6)	—	1-17
CURB-65 2	1.2 (1, 1.5)	—	1-17
CURB-65 3	2.6 (2.1, 3.2)	—	1-17
CURB-65 4	5.9 (4.5, 7.8)	—	1-17
CURB-65 5	11.1 (6.6, 18.7)	—	4-14
CHAPTER 33 CHRONIC OBSTRUCTIVE LUNG DISEASE			
Early inspiratory crackles, detecting severe disease	20.8 (3, 142.2)	0.1 (0, 0.4)	48
Any crackles, detecting COPD	0.9 (0.5, 1.6)	1 (1, 1)	40-44
EBM BOX 33.1 CHRONIC OBSTRUCTIVE PULMONARY DISEASE			
Barrel chest	1.5 (1.2, 2)	0.6 (0.4, 0.8)	49
AP/L chest diameter ratio ≥0.9	2 (1.1, 3.3)	0.8 (0.7, 1)	49
Pursed lip breathing	2.7 (1.8, 4)	0.5 (0.4, 0.7)	49
Scalene/sternomastoid muscle use	3.3 (1.8, 5.9)	0.7 (0.6, 0.8)	49
Maximum laryngeal height ≤4 cm	3.6 (2.1, 6)	0.7 (0.6, 0.8)	52
Laryngeal descent, >3 cm	0.9 (0.5, 1.4)	1 (0.9, 1.1)	52
Hoover sign	4.2 (2.5, 7)	0.5 (0.4, 0.7)	37
Subxiphoid cardiac impulse	7.4 (2, 27.1)	0.9 (0.7, 1.1)	16-44
Absent cardiac dullness left lower sternum	11.8 (1.2, 121)	0.9 (0.7, 1.1)	14
Hyperresonance upper right anterior chest	7.3 (3.6, 14.9)	0.8 (0.7, 0.9)	16-40
Diaphragm excursion <2 cm	5.3 (0.8, 35)	0.9 (0.7, 1.1)	16
Reduced breath sounds	3.5 (2.1, 5.6)	0.5 (0.4, 0.7)	15-49
Breath sound score ≤9	10.2 (4.6, 22.7)	—	19-56
Breath sound score 10-12	3.6 (1.4, 9.5)	—	19-56
Breath sound score 13-15	0.7 (0.3, 1.5)	—	19-56
Breath sound score ≥16	0.1 (0, 0.3)	—	19-56
Early inspiratory crackles	14.6 (3, 70)	0.4 (0.1, 1.4)	15-55
Any unforced wheeze	2.6 (1.7, 3.9)	0.8 (0.7, 0.9)	13-83
Forced expiratory time >9 s	4.1 (2.6, 6.4)	—	55-71
Forced expiratory time 3-9 s	1.3 (0.5, 2.9)	—	55-71

APPENDIX TABLE I Likelihood Ratios, Confidence Intervals, and Pre-Test Probability—cont'd

Finding	Positive Likelihood Ratio (95% CI)	Negative Likelihood Ratio (95% CI)	Pre-Test Probability (Range)
Forced expiratory time <3 s	0.2 (0.1, 0.3)	—	55-71
≥2 combined findings	25.7 (6.2, 106)	0.3 (0.2, 0.7)	16
EBM BOX 33.2 PROGNOSIS OF COPD			
BAP-65 class 1	0.3 (0.2, 0.4)	—	3-11
BAP-65 class 2	0.4 (0.2, 0.5)	—	3-11
BAP-65 class 3	1.1 (0.9, 1.3)	—	3-11
BAP-65 class 4	4 (3.6, 4.5)	—	3-11
BAP-65 class 5	10.4 (7.4, 14.7)	—	3-11
CHAPTER 34 PULMONARY EMBOLISM			
Sudden dyspnea	2.4 (2, 2.9)	0.3 (0.2, 0.3)	40-43
Syncope	2 (1.6, 2.5)	0.9 (0.8, 1)	19-40
Hemoptysis	1.9 (1.5, 2.5)	1 (0.9, 1)	19-43
Pulse <90/min	0.3 (0.1, 0.8)	1.8 (1.3, 2.5)	33
PaO ₂ <80 mm Hg	1.1 (1, 1.3)	0.7 (0.4, 1.1)	28-36
A-a gradient >20 mm Hg	1.2 (0.9, 1.5)	0.6 (0.4, 1.01)	27-36
EBM BOX 34.1 PULMONARY EMBOLISM			
Diaphoresis	0.6 (0.3, 1.4)	1 (1, 1.1)	23
Cyanosis	2.3 (0.4, 15.6)	1 (1, 1)	21-23
Pulse rate >100/min	1.3 (1, 1.6)	0.9 (0.8, 1)	18-43
Systolic BP ≤100 mm Hg	1.9 (1.1, 3)	1 (0.9, 1)	27
Temperature >38°C	0.5 (0.3, 0.9)	1.1 (1, 1.1)	21-43
Respiratory rate >30/min	2 (1.5, 2.8)	0.9 (0.8, 0.9)	28
Accessory muscle use	1.5 (0.6, 3.6)	0.9 (0.8, 1.1)	21
Crackles	0.8 (0.4, 1.6)	1.1 (0.7, 1.8)	23-38
Wheezes	0.4 (0.1, 0.97)	1.1 (1, 1.2)	23-40
Pleural friction rub	1.4 (0.6, 3.1)	1 (1, 1)	21-23
Elevated neck veins	1.7 (1.1, 2.6)	1 (0.9, 1)	21-38
Left parasternal heave	2.4 (1.03, 5.5)	1 (1, 1)	21-23
Loud P2	2 (0.8, 5.1)	0.9 (0.8, 1)	22-33
New gallop (S3 or S4)	2.7 (1, 7)	0.8 (0.6, 1)	33
Chest wall tenderness	0.8 (0.6, 1.1)	1.1 (1, 1.1)	21-23
Unilateral calf pain or swelling	2.5 (1.9, 3.4)	0.8 (0.7, 0.9)	19-43
Simplified Wells score low probability	0.3 (0.2, 0.4)	—	9-43
Simplified Wells moderate probability	1.6 (1.4, 1.8)	—	9-43
Simplified Wells high probability	7.5 (4.6, 12.1)	—	9-43
Modified Geneva low probability	0.3 (0.3, 0.4)	—	15-32
Modified Geneva moderate probability	1.1 (1, 1.3)	—	15-32
Modified Geneva high probability	6.6 (5.1, 8.7)	—	15-32

Continued

APPENDIX TABLE I Likelihood Ratios, Confidence Intervals, and Pre-Test Probability—cont'd			
Finding	Positive Likelihood Ratio (95% CI)	Negative Likelihood Ratio (95% CI)	Pre-Test Probability (Range)
CHAPTER 35 PLEURAL EFFUSION			
Absent vesicular breath sounds in ARDS, detecting underlying pleural effusion	4.3 (2.8, 6.5)	0.6 (0.5, 0.8)	26
EBM BOX 35.1 PLEURAL EFFUSION			
Asymmetric chest expansion	8.1 (5.2, 12.7)	0.3 (0.2, 0.4)	21
Reduced tactile fremitus	5.7 (4, 8)	0.2 (0.1, 0.4)	20
Dullness by conventional percussion	4.8 (3.6, 6.4)	0.1 (0.1, 0.3)	21
Auscultatory percussion (Guarino method)	8.3 (1.8, 38.7)	0.2 (0, 1.6)	21-40
Decreased or absent breath sounds	5.2 (3.8, 7.1)	0.1 (0.1, 0.3)	21
Reduced vocal resonance	6.5 (4.4, 9.6)	0.3 (0.2, 0.4)	20
Crackles	0.7 (0.5, 1)	1.5 (1.1, 2)	21
Pleural rub	3.9 (0.8, 18.7)	1 (0.9, 1)	21
CHAPTER 36 INSPECTION OF THE NECK VEINS			
Measured RA pressure ≥10 mm Hg, detecting pulmonary capillary wedge pressure ≥22 mm Hg	3.5 (2.2, 5.7)	0.3 (0.2, 0.5)	51-62
Kussmaul sign, predicting mortality	3.5 (1.5, 8.1)	0.7 (0.5, 0.9)	43
Intermittent cannon A waves, detecting atrioventricular dissociation	3.8 (1.8, 8.2)	0.1 (0, 0.4)	55
EBM BOX 36.1 INSPECTION OF THE NECK VEINS			
Elevated venous pressure, detecting CVP >8 cm water	8.9 (4.6, 17.3)	0.3 (0.2, 0.5)	30-70
Elevated venous pressure, detecting CVP >12 cm water	6.6 (2.7, 16.1)	0.2 (0.1, 0.4)	17-55
Elevated venous pressure, detecting elevated left heart diastolic pressures	3.9 (1.6, 9.4)	0.7 (0.5, 1)	19-75
Elevated venous pressure, detecting low left ventricular ejection fraction	6.3 (3.5, 11.3)	0.9 (0.8, 1)	8-69
Elevated venous pressure, detecting myocardial infarction in patients with chest pain	2.4 (1.4, 4.2)	0.9 (0.9, 1)	6
Elevated venous pressure, predicting postoperative pulmonary edema	11.3 (5, 25.8)	0.8 (0.7, 1)	4

APPENDIX TABLE I Likelihood Ratios, Confidence Intervals, and Pre-Test Probability—cont'd

Finding	Positive Likelihood Ratio (95% CI)	Negative Likelihood Ratio (95% CI)	Pre-Test Probability (Range)
Elevated venous pressure, predicting postoperative myocardial infarction or CHF	9.4 (4, 22.4)	0.8 (0.7, 1)	4
Estimated venous pressure ≤ 5 cm water; detecting measured venous pressure ≤ 5 cm water	8.4 (2.8, 25)	0.1 (0, 0.7)	26
Positive abdominojugular test, detecting elevated left heart diastolic pressures	8 (2.1, 31.2)	0.3 (0.2, 0.6)	17-75
Early systolic outward movement, detecting moderate-to-severe tricuspid regurgitation	10.9 (5.5, 21.7)	0.7 (0.5, 0.8)	18
EBM BOX 37.1 PERCUSSION OF THE HEART			
Cardiac dullness > 10.5 cm from midsternal line (patient supine), detecting cardiothoracic ratio > 0.5	2.5 (1.8, 3.4)	0.05 (0, 0.3)	36
Cardiac dullness extending > 10.5 cm from midsternal line (patient supine), detecting increased left ventricular end-diastolic volume	1.4 (1.1, 1.7)	0.2 (0, 1.3)	17
Cardiac dullness extending beyond midclavicular line (patient upright), detecting cardiothoracic ratio > 0.5	2.4 (1.1, 5.2)	0.05 (0, 0.4)	76
EBM BOX 38.1 SIZE AND POSITION OF APICAL IMPULSE			
Supine apical impulse lateral to MCL, detecting cardiothoracic ratio > 0.5	3.4 (1.6, 7.3)	0.6 (0.5, 0.8)	25-28
Supine apical impulse lateral to MCL, detecting low ejection fraction	10.3 (5, 21.1)	0.7 (0.6, 0.9)	8-69
Supine apical impulse lateral to MCL, detecting increased left ventricular end-diastolic volume	5.1 (2.7, 9.7)	0.7 (0.6, 0.8)	15-48
Supine apical impulse lateral to MCL, detecting pulmonary capillary wedge pressure > 12 mm Hg	5.8 (1.3, 26)	0.6 (0.4, 1)	30
Supine apical impulse > 10 cm from midsternal line, detecting cardiothoracic ratio > 0.5	4.3 (0.3, 70.8)	0.5 (0.3, 0.8)	25-36

Continued

APPENDIX TABLE I Likelihood Ratios, Confidence Intervals, and Pre-Test Probability—cont'd

Finding	Positive Likelihood Ratio (95% CI)	Negative Likelihood Ratio (95% CI)	Pre-Test Probability (Range)
Apical beat diameter ≥4 cm in left lateral decubitus position at 45 degrees, detecting increased left ventricular end diastolic volume	4.7 (2.1, 10.2)	0.4 (0.2, 1)	32-50
EBM BOX 38.2 ABNORMAL PALPABLE MOVEMENTS			
Hyperkinetic apical movement, detecting associated mitral regurgitation or aortic valve disease in patients with mitral stenosis	11.2 (6.4, 19.5)	0.3 (0.2, 0.4)	39
Sustained or double supine apical impulse, detecting left ventricular hypertrophy	5.6 (3.3, 9.5)	0.5 (0.3, 0.7)	27
Sustained apical movement detecting aortic stenosis in patients with aortic flow murmurs	4.1 (1.7, 10.1)	0.3 (0.1, 0.5)	69
Sustained apical movement, detecting moderate-to-severe aortic regurgitation in patients with basal early diastolic murmurs	2.4 (1.4, 4)	0.1 (0, 0.9)	41
Lower sternal movements, detecting moderate-to-severe tricuspid regurgitation	12.5 (4.1, 38)	0.8 (0.8, 0.9)	18
Sustained left lower parasternal movement, detecting right ventricular peak pressure ≥50 mm Hg	3.6 (1.4, 8.9)	0.4 (0.2, 0.7)	51
RV rock, detecting moderate-to-severe tricuspid regurgitation	31.4 (1.6, 601)	0.9 (0.9, 1)	18
Pulsatile liver, detecting moderate-to-severe tricuspid regurgitation	6.5 (2.2, 19.3)	0.8 (0.7, 1)	18-41
Palpable S2, detecting pulmonary hypertension in patients with mitral stenosis	3.6 (1.5, 8.8)	0.05 (0, 0.8)	52
EBM BOX 40.1 FIRST AND SECOND HEART SOUNDS			
Varying intensity of S1, detecting atrioventricular dissociation	24.4 (1.5, 385)	0.4 (0.3, 0.7)	55
Fixed wide splitting of S2, detecting atrial septal defect	2.6 (1.6, 4.3)	0.1 (0, 0.8)	30
Paradoxical splitting of S2, detecting significant aortic stenosis	2.4 (0.8, 7)	0.6 (0.2, 1.7)	5

APPENDIX TABLE I Likelihood Ratios, Confidence Intervals, and Pre-Test Probability—cont'd

Finding	Positive Likelihood Ratio (95% CI)	Negative Likelihood Ratio (95% CI)	Pre-Test Probability (Range)
Loud P2, detecting pulmonary hypertension if mitral stenosis	1.2 (0.9, 1.5)	0.8 (0.3, 1.9)	32-52
Loud P2, detecting pulmonary hypertension if cirrhosis	17.6 (2.1, 149)	0.6 (0.4, 1.1)	15
Palpable P2, detecting pulmonary hypertension	3.6 (1.5, 8.8)	0.05 (0, 0.8)	52
Absent or soft S2, detecting severe aortic stenosis in patients with aortic flow murmurs	3.8 (2.4, 6)	0.4 (0.4, 0.5)	5-60
CHAPTER 41 THIRD AND FOURTH HEART SOUNDS			
S3 in aortic stenosis, detecting pulmonary capillary wedge pressure > 12 mm Hg	2.3 (1.3, 4)	0.9 (0.8, 1)	46
S3 in aortic stenosis, detecting ejection fraction < 0.5	5.7 (2.7, 12)	0.8 (0.7, 0.9)	41
S3 in aortic regurgitation, detecting severe regurgitation	5.9 (1.4, 25.3)	0.8 (0.7, 0.9)	50
S3 in aortic regurgitation, detecting ejection fraction < 0.5	8.3 (3.6, 19.2)	0.4 (0.2, 0.9)	8
EBM BOX 41.1 THE THIRD AND FOURTH HEART SOUNDS			
S3, detecting ejection fraction < 0.5	3.4 (2.6, 4.4)	0.7 (0.5, 0.8)	30-80
S3, detecting ejection fraction < 0.3	4.1 (2.3, 7.3)	0.3 (0.2, 0.5)	19-47
S3, detecting elevated left heart filling pressure	3.9 (2.1, 7.1)	0.8 (0.7, 0.9)	19-68
S3, detecting elevated BNP level	10.1 (4.2, 23.9)	0.5 (0.3, 0.8)	50-61
S3, detecting myocardial infarction in patients with acute chest pain	3.2 (1.6, 6.5)	0.9 (0.8, 1)	12
S3, predicting postoperative pulmonary edema	14.6 (5.7, 37.3)	0.8 (0.7, 1)	4
S3, predicting postoperative myocardial infarction or cardiac death	8 (2.7, 23.4)	0.9 (0.8, 1)	4
S4, predicting 5-year mortality in patients after myocardial infarction	3.2 (1.3, 7.8)	0.8 (0.6, 1.1)	9
S4, detecting elevated left heart filling pressures	1.3 (0.8, 1.9)	0.9 (0.7, 1.2)	46-67
S4, detecting severe aortic stenosis	0.9 (0.5, 1.9)	1.1 (0.6, 1.9)	5-90

Continued

APPENDIX TABLE I Likelihood Ratios, Confidence Intervals, and Pre-Test Probability—cont'd			
Finding	Positive Likelihood Ratio (95% CI)	Negative Likelihood Ratio (95% CI)	Pre-Test Probability (Range)
EBM BOX 43.1 MURMURS AND VALVULAR HEART DISEASE			
Functional murmur, detecting normal echocardiogram	4.7 (2.1, 10.7)	0.1 (0, 1.4)	21-77
Characteristic murmur, detecting mild or worse aortic stenosis	5.9 (4.5, 7.8)	0.1 (0.1, 0.2)	20
Characteristic murmur, detecting severe aortic stenosis	3.5 (3.1, 4)	0.1 (0, 0.2)	2-26
Characteristic murmur, detecting mild or worse mitral regurgitation	5.4 (3.7, 8.1)	0.4 (0.2, 0.7)	43-57
Characteristic murmur, detecting moderate or severe mitral regurgitation	2.6 (1.6, 4)	0.3 (0.2, 0.6)	10-20
Characteristic murmur, detecting mild or worse tricuspid regurgitation	14.6 (4.5, 47.1)	0.8 (0.7, 0.9)	39
Characteristic murmur detecting moderate or severe tricuspid regurgitation	9.6 (6, 15.4)	0.6 (0.3, 1.2)	7-18
Characteristic murmur, detecting ventricular septal defect	24.9 (8.6, 72.7)	0.1 (0, 1.4)	4
Characteristic murmur, detecting MVP	12.1 (4, 36.4)	0.5 (0.2, 0.9)	11
Characteristic murmur, detecting mild aortic regurgitation or worse	9.9 (4.9, 20)	0.3 (0.2, 0.4)	29-88
Characteristic murmur, detecting moderate or severe aortic regurgitation	4.3 (2.1, 8.6)	0.1 (0.1, 0.2)	8-35
Characteristic murmur, detecting pulmonic regurgitation	17.4 (3.6, 83.2)	0.9 (0.8, 1)	15
EBM BOX 43.2 DIFFERENTIAL DIAGNOSIS OF SYSTOLIC MURMURS IN ADULTS			
Detecting Aortic Velocity ≥2.5 m/s			
Broad apical-base murmur pattern	9.7 (6.7, 14)	0.1 (0.1, 0.2)	20
Broad apical murmur pattern	0.2 (0.1, 0.9)	1.1 (1.1, 1.2)	20
LLSB murmur pattern	0.7 (0.2, 2.4)	1 (1, 1.1)	20
S1 inaudible	5.1 (3.5, 7.4)	0.5 (0.4, 0.6)	20
S2 inaudible	12.7 (5.3, 30.4)	0.7 (0.6, 0.8)	21
S2 loud	1.7 (0.9, 3.1)	0.9 (0.8, 1)	21
Radiation to neck	2.4 (1.9, 3)	0.2 (0.1, 0.3)	33
Timing midsystolic or early systolic	0.4 (0.3, 0.6)	2 (1.5, 2.5)	33

APPENDIX TABLE I Likelihood Ratios, Confidence Intervals, and Pre-Test Probability—cont'd

Finding	Positive Likelihood Ratio (95% CI)	Negative Likelihood Ratio (95% CI)	Pre-Test Probability (Range)
Timing long systolic or holosystolic	2.2 (1.7, 2.8)	0.4 (0.3, 0.6)	33
Coarse quality murmur	3.3 (2.4, 4.5)	0.3 (0.2, 0.4)	33
Murmur same intensity in beat after pause	0.4 (0.2, 0.7)	1.9 (1.3, 2.8)	36
Detecting Moderate or Severe Mitral Regurgitation			
Broad apical-base murmur pattern	1.1 (0.7, 1.7)	1 (0.8, 1.1)	20
Broad apical murmur pattern	6.8 (3.9, 11.9)	0.7 (0.6, 0.8)	20
LLSB murmur pattern	1.1 (0.4, 3.4)	1 (0.9, 1.1)	20
S1 inaudible	1.4 (0.9, 2.2)	0.9 (0.8, 1.1)	20
S2 inaudible	0.5 (0.2, 1.6)	1.1 (1, 1.1)	20
S2 loud	4.7 (2.7, 8.3)	0.7 (0.6, 0.9)	20
Radiation to neck	0.6 (0.4, 0.9)	1.6 (1.2, 2.1)	28
Timing midsystolic or early systolic	0.4 (0.2, 0.6)	1.9 (1.5, 2.5)	28
Timing long systolic or holosystolic	1.9 (1.5, 2.4)	0.5 (0.3, 0.7)	28
Coarse quality murmur	0.5 (0.3, 0.8)	1.5 (1.2, 1.8)	28
Murmur same intensity in beat after pause	2.5 (1.5, 4.3)	0.4 (0.3, 0.7)	44
Detecting Moderate or Severe Tricuspid Regurgitation			
Broad apical-base murmur pattern	0.8 (0.4, 1.3)	1.1 (0.9, 1.3)	18
Broad apical murmur pattern	2.5 (1.4, 4.5)	0.8 (0.7, 1)	18
LLSB murmur pattern	8.4 (3.5, 20.3)	0.8 (0.7, 0.9)	18
S1 inaudible	1 (0.6, 1.7)	1 (0.9, 1.1)	18
S2 inaudible	1.4 (0.6, 3.3)	1 (0.9, 1.1)	18
S2 loud	3.6 (2.1, 6.3)	0.7 (0.6, 0.9)	18
Radiation to neck	0.6 (0.4, 0.9)	1.5 (1.2, 2)	22
Timing midsystolic or early systolic	0.5 (0.3, 0.8)	1.7 (1.3, 2.1)	22
Timing long systolic or holosystolic	1.7 (1.3, 2.2)	0.5 (0.3, 0.8)	22
Coarse quality murmur	0.5 (0.3, 0.9)	1.4 (1.2, 1.8)	22
Murmur same intensity in beat after pause	2.3 (1.4, 3.6)	0.4 (0.2, 0.8)	35
EBM BOX 43.3 SYSTOLIC MURMURS AND MANEUVERS			
Murmur louder with inspiration, detecting right-sided murmur	7.8 (3.7, 16.7)	0.2 (0.1, 0.5)	20-50

Continued

APPENDIX TABLE I Likelihood Ratios, Confidence Intervals, and Pre-Test Probability—cont'd

Finding	Positive Likelihood Ratio (95% CI)	Negative Likelihood Ratio (95% CI)	Pre-Test Probability (Range)
Murmur louder with Valsalva strain, detecting hypertrophic cardiomyopathy	14 (3.4, 57.4)	0.3 (0.1, 0.8)	20
Murmur louder with squatting-to-standing, detecting hypertrophic cardiomyopathy	6 (2.9, 12.3)	0.1 (0, 0.8)	20
Murmur softer with standing-to-squatting, detecting hypertrophic cardiomyopathy	7.6 (2.5, 22.7)	0.1 (0, 0.4)	20-41
Murmur softer with passive leg elevation, detecting hypertrophic cardiomyopathy	9 (3.5, 23.3)	0.1 (0, 0.7)	20
Murmur softer with hand grip, detecting hypertrophic cardiomyopathy	3.6 (2, 6.4)	0.1 (0, 0.9)	20
Murmur louder with hand grip, detecting mitral regurgitation or ventricular septal defect	5.8 (1.9, 17.3)	0.3 (0.2, 0.5)	40-65
Murmur louder with transient arterial occlusion, detecting mitral regurgitation or ventricular septal defect	48.7 (3.1, 769)	0.2 (0.1, 0.5)	40
Murmur softer with amyl nitrite inhalation, detecting mitral regurgitation or ventricular septal defect	10.5 (5.1, 21.5)	0.2 (0.1, 0.6)	40-71
CHAPTER 44 AORTIC STENOSIS			
Effort syncope and aortic murmur, detecting severe aortic stenosis	3.1 (1.3, 7.3)	0.9 (0.8, 1)	70-75
Angina and aortic murmur, detecting severe aortic stenosis	0.9 (0.7, 1)	1.3 (0.9, 1.9)	70
Dyspnea and aortic murmur, detecting severe aortic stenosis	1.4 (0.6, 3.1)	0.8 (0.4, 1.5)	70
Calcification of aortic valve on CXR, detecting severe aortic stenosis	3.9 (2.1, 7.3)	0.5 (0.4, 0.7)	49-70
ECG LVH, detecting severe aortic stenosis	2.1 (1.7, 2.7)	0.5 (0.4, 0.6)	13-70
Delayed carotid artery upstroke, detecting moderate-to-severe aortic stenosis	7.6 (3.8, 15.1)	0.5 (0.4, 0.7)	13-57

APPENDIX TABLE I Likelihood Ratios, Confidence Intervals, and Pre-Test Probability—cont'd

Finding	Positive Likelihood Ratio (95% CI)	Negative Likelihood Ratio (95% CI)	Pre-Test Probability (Range)
Absent or diminished S2, detecting moderate-to-severe aortic stenosis	7.4 (2.8, 19.2)	0.5 (0.4, 0.7)	13-57
Prolonged duration of murmur, detecting moderate-to-severe aortic stenosis	11.4 (1.3, 97.2)	0.3 (0.2, 0.4)	24-57
Murmur late peaking, detecting moderate-to-severe aortic stenosis	13.7 (2.9, 65.7)	0.3 (0.2, 0.4)	24-49
0 to 6 points, detecting moderate-to-severe aortic stenosis	0.2 (0.1, 0.4)	4.7 (1.9, 11.4)	73
7 to 9 points, detecting moderate-to-severe aortic stenosis	2.7 (0.9, 8.1)	0.7 (0.6, 1)	73
10 to 14 points, detecting moderate-to-severe aortic stenosis	10.6 (1.5, 73.3)	0.6 (0.4, 0.7)	73
EBM BOX 44.1 AORTIC STENOSIS MURMUR			
Aortic systolic murmur, detecting mild or worse aortic stenosis	5.9 (4.5, 7.8)	0.1 (0.1, 0.2)	20
Aortic systolic murmur, detecting severe aortic stenosis	3.5 (3.1, 4)	0.1 (0, 0.2)	2-26
EBM BOX 42.2 SEVERE AORTIC STENOSIS			
Delayed carotid artery upstroke	3.5 (2.6, 4.6)	0.4 (0.2, 0.7)	5-69
Reduced carotid artery volume	2.3 (1.8, 2.9)	0.4 (0.3, 0.7)	28-69
Brachioradial delay	2.5 (1.4, 4.7)	0.04 (0, 0.7)	52
Sustained apical impulse	4.1 (1.7, 10.1)	0.3 (0.1, 0.5)	69
Apical-carotid delay	2.6 (1.4, 5.2)	0.05 (0, 0.7)	53
Absent or soft S2	3.8 (2.4, 6)	0.4 (0.4, 0.5)	5-60
S4 gallop	0.9 (0.5, 1.9)	1.1 (0.6, 1.9)	5-90
Murmur grade $\geq 3/6$	1.2 (1, 1.4)	0.8 (0.5, 1.3)	29-70
Murmur early systolic	0.1 (0, 0.7)	1.6 (1.3, 2)	28
Murmur prolonged duration	3 (1.7, 5.2)	0.2 (0.1, 0.4)	5-28
Murmur late peaking	3.7 (2.6, 5.2)	0.2 (0.1, 0.2)	5-75
Murmur loudest over aortic area	1.8 (1.1, 2.9)	0.6 (0.4, 0.7)	5-49
Murmur radiates to neck	1.3 (1, 1.6)	0.1 (0, 0.3)	5-49
Murmur radiates to both sides of neck	1.9 (1.1, 3.4)	0.7 (0.4, 1)	28
Murmur quality blowing	0.1 (0, 0.8)	1.4 (1.2, 1.7)	28
Murmur with humming quality	2.1 (1.3, 3.5)	0.5 (0.3, 0.9)	28

Continued

APPENDIX TABLE I Likelihood Ratios, Confidence Intervals, and Pre-Test Probability—cont'd

Finding	Positive Likelihood Ratio (95% CI)	Negative Likelihood Ratio (95% CI)	Pre-Test Probability (Range)
EBM BOX 45.1 AORTIC REGURGITATION			
Characteristic diastolic murmur, detecting mild aortic regurgitation or worse	9.9 (4.9, 20)	0.3 (0.2, 0.4)	29-88
Characteristic diastolic murmur, detecting moderate or severe aortic regurgitation	4.3 (2.1, 8.6)	0.1 (0.1, 0.2)	8-35
Murmur loudest on right side of sternum, detecting dilated aortic root or endocarditis	8.2 (5, 13.3)	0.7 (0.7, 0.8)	14
Murmur softer with amyl nitrate, detecting aortic regurgitation (vs. Graham Steell murmur)	5.7 (0.5, 71.4)	0.1 (0, 0.3)	93
EBM BOX 45.2 MODERATE-TO-SEVERE AORTIC REGURGITATION			
Murmur grade 3 or louder	8.2 (2.2, 31.1)	0.6 (0.4, 0.9)	24-45
Diastolic BP >70 mm Hg	0.2 (0.1, 0.9)	—	41-56
Diastolic BP 51-70 mm Hg	1.1 (0.7, 1.7)	—	41-56
Diastolic BP ≤50 mm Hg	19.3 (2.7, 141)	—	41-56
Pulse pressure <60 mm Hg	0.3 (0.1, 0.9)	—	42
Pulse pressure 60-79 mm Hg	0.8 (0.2, 2.9)	—	42
Pulse pressure ≥80 mm Hg	10.9 (1.5, 77.1)	—	42
Hill's test <40 mm Hg	0.3 (0.2, 0.8)	—	42
Hill's test 40 to 59 mm Hg	2.4 (0.6, 9.7)	—	42
Hill's test ≥60 mm Hg	17.3 (1.1, 284)	—	42
Enlarged or sustained apical impulse	2.4 (1.4, 4)	0.1 (0, 0.9)	41
S3 gallop	5.9 (1.4, 25.3)	0.8 (0.7, 0.9)	50
Duroziez sign, femoral pistol shot, water hammer pulse	3.4 (0.4, 31)	0.7 (0.5, 0.9)	41-75
CHAPTER 46 MISCELLANEOUS HEART MURMURS			
Apical systolic murmur, detecting mild or worse mitral regurgitation	5.4 (3.7, 8.1)	0.4 (0.2, 0.7)	43-57
Apical systolic murmur, detecting moderate-to-severe mitral regurgitation	2.6 (1.6, 4)	0.3 (0.2, 0.6)	10-20
Characteristic MVP murmur, detecting MVP	12.1 (4, 36.4)	0.5 (0.2, 0.9)	11
Characteristic tricuspid regurgitation murmur, detecting mild or worse tricuspid regurgitation	14.6 (4.5, 47.1)	0.8 (0.7, 0.9)	39
Characteristic murmur of pulmonic regurgitation (PR), detecting PR	17.4 (3.6, 83.2)	0.9 (0.8, 1)	15

APPENDIX TABLE I Likelihood Ratios, Confidence Intervals, and Pre-Test Probability—cont'd

Finding	Positive Likelihood Ratio (95% CI)	Negative Likelihood Ratio (95% CI)	Pre-Test Probability (Range)
Apical mid-diastolic rumble, detecting mitral annular calcification	7.5 (2.3, 24.4)	0.9 (0.9, 1)	55
EBM BOX 46.1 MODERATE-TO-SEVERE MITRAL OR TRICUSPID REGURGITATION			
MR murmur grade 3 or louder	4.4 (2.9, 6.7)	0.2 (0.1, 0.3)	42
S3 gallop (MR)	4.4 (0.6, 31.8)	0.8 (0.7, 0.8)	49-62
CV wave, neck veins (TR)	10.9 (5.5, 21.7)	0.7 (0.5, 0.8)	18
Lower sternal precordial pulsation (TR)	12.5 (4.1, 38)	0.8 (0.8, 0.9)	18
RV rock (TR)	31.4 (1.6, 601)	0.9 (0.9, 1)	18
Pulsatile liver (TR)	6.5 (2.2, 19.3)	0.8 (0.7, 1)	18-41
EBM BOX 46.2 OTHER FINDINGS IN MITRAL STENOSIS			
Graham Steell murmur, detecting pulmonary hypertension	4.2 (1.1, 15.5)	0.4 (0.2, 0.9)	52
Hyperkinetic apical movement, detecting associated mitral regurgitation or aortic valve disease	11.2 (6.4, 19.5)	0.3 (0.2, 0.4)	39
Hyperkinetic arterial pulse, detecting associated mitral regurgitation	14.2 (7.4, 27.2)	0.3 (0.2, 0.4)	35
CHAPTER 47 DISORDERS OF THE PERICARDIUM			
Pericardial rub in patient with cancer and pericarditis, detecting idiopathic or radiation-induced pericarditis (not neoplastic)	5.5 (1.4, 21.9)	0.4 (0.2, 0.9)	42
Pericardial rub and inflammatory signs in patient with pericarditis, detecting non-neoplastic pericarditis	2.3 (1.1, 4.6)	0.7 (0.6, 0.9)	87
Pulsus paradoxus > 12 mm Hg, detecting cardiac tamponade	5.9 (2.4, 14.3)	0.03 (0, 0.2)	63
CHAPTER 48 CONGESTIVE HEART FAILURE			
Crackles, detecting elevated filling pressure in patients with known cardiomyopathy	2.1 (1.2, 3.8)	0.8 (0.7, 1)	54-86
Pulse-amplitude ratio > 0.7, detecting wedge pressure > 15 mm Hg	18.2 (2.7, 123)	0.1 (0, 0.4)	52
Cheyne-Stokes respirations, detecting ejection fraction < 0.40 (age 80 years or less)	8.1 (4, 16.3)	0.7 (0.6, 0.8)	21

Continued

APPENDIX TABLE I Likelihood Ratios, Confidence Intervals, and Pre-Test Probability—cont'd			
Finding	Positive Likelihood Ratio (95% CI)	Negative Likelihood Ratio (95% CI)	Pre-Test Probability (Range)
Cheyne-Stokes respirations, detecting ejection fraction <0.40 (age > 80 years)	2.7 (1.1, 6.6)	0.7 (0.4, 1.1)	17
S3 gallop, detecting ejection fraction <30%	4.1 (2.3, 7.3)	0.3 (0.2, 0.5)	19-47
Proportional pulse pressure ≤25%, detecting low cardiac index	6.9 (3, 15.8)	0.2 (0.1, 0.6)	50-64
S3, detecting consensus diagnosis of heart failure	7.2 (5, 10.2)	0.9 (0.9, 0.9)	29-55
Displaced apical impulse, detecting consensus diagnosis of heart failure	6.7 (4, 11)	0.8 (0.7, 0.8)	29
Elevated neck veins, detecting consensus diagnosis of heart failure	4.8 (4, 5.8)	0.7 (0.7, 0.8)	29-71
BNP ≥100, detecting consensus diagnosis of heart failure	3.6 (2.1, 6.3)	0.1 (0.1, 0.1)	39-55
Cold profile if heart failure, predicting early mortality	5.2 (1.8, 15.3)	0.6 (0.5, 0.7)	9-17
EBM BOX 48.1 DETECTING ELEVATED LEFT HEART FILLING PRESSURE			
Heart rate > 100/min at rest	5.5 (1.3, 24.1)	0.9 (0.9, 1)	19
Abnormal Valsalva response	7.6 (1.7, 34.3)	0.1 (0, 0.8)	48
Pulse increase of 10% during Valsalva strain	0.2 (0.1, 0.9)	1.7 (1.3, 2.2)	25
Crackles	1.6 (0.8, 2.9)	0.9 (0.9, 1)	19-77
Elevated jugular venous pressure	3.9 (1.6, 9.4)	0.7 (0.5, 1)	19-75
Positive abdominojugular test	8 (2.1, 31.2)	0.3 (0.2, 0.6)	17-75
Supine apical impulse lateral to MCL	5.8 (1.3, 26)	0.6 (0.4, 1)	30
S3 gallop	3.9 (2.1, 7.1)	0.8 (0.7, 0.9)	19-68
S4 gallop	1.3 (0.8, 1.9)	0.9 (0.7, 1.2)	46-67
Edema	1.4 (0.6, 3.2)	1 (0.9, 1)	19-68
EBM BOX 48.2 DETECTING LOW EJECTION FRACTION			
Heart rate > 100/min at rest	2.8 (1.3, 5.9)	0.8 (0.7, 1)	16
Cheyne-Stokes respirations	5.4 (3.2, 9.2)	0.7 (0.6, 0.8)	20
Abnormal Valsalva response	7.6 (4.9, 11.8)	0.3 (0.2, 0.4)	41-46
Crackles	1.5 (0.9, 2.4)	0.9 (0.8, 1)	8-69
Elevated jugular venous pressure	6.3 (3.5, 11.3)	0.9 (0.8, 1)	8-69
Supine apical impulse lateral to MCL	10.3 (5, 21.1)	0.7 (0.6, 0.9)	8-69
S3 gallop	3.4 (2.6, 4.4)	0.7 (0.5, 0.8)	30-80

APPENDIX TABLE I Likelihood Ratios, Confidence Intervals, and Pre-Test Probability—cont'd

Finding	Positive Likelihood Ratio (95% CI)	Negative Likelihood Ratio (95% CI)	Pre-Test Probability (Range)
S4 gallop	1.2 (0.8, 1.9)	0.9 (0.5, 1.4)	30-60
Murmur of mitral regurgitation	2.2 (0.9, 5.7)	0.8 (0.7, 1)	56
Hepatomegaly	0.9 (0.1, 9.4)	1 (0.9, 1.1)	69
Edema	1.2 (0.8, 1.8)	0.9 (0.9, 1)	8-69
CHAPTER 49 CORONARY ARTERY DISEASE			
Right arm radiation, detecting myocardial infarction	2.7 (1.7, 4.3)	0.9 (0.8, 0.9)	12-49
Left arm radiation, detecting myocardial infarction	1.5 (1.3, 1.8)	0.8 (0.7, 0.9)	6-49
Chest wall tenderness, predicting acute coronary syndrome in next 30 days	0.1 (0, 0.4)	1.1 (1, 1.1)	20
Troponin T positive (>6 h after onset of chest pain), predicting cardiac events	6.1 (4.7, 7.9)	0.2 (0.1, 0.5)	4
EBM BOX 49.1 CORONARY ARTERY DISEASE			
Typical angina	5.8 (4.2, 7.8)	—	44-65
Atypical angina	1.2 (1.1, 1.3)	—	44-58
Non-anginal chest pain	0.1 (0.1, 0.2)	—	44-58
Pain duration >30 min	0.1 (0, 0.9)	1.2 (1, 1.3)	50
Associated dysphagia	0.2 (0.1, 0.8)	1.2 (1, 1.4)	50
Male sex	1.7 (1.6, 1.8)	0.3 (0.3, 0.4)	51-83
Age <30 years	0.1 (0, 1.1)	—	51-68
Age 30-49 years	0.6 (0.5, 0.7)	—	51-83
Age 70-70 years	1.3 (1.3, 1.4)	—	51-83
Age >70 years	2.6 (1.8, 4)	—	51-90
Prior myocardial infarction	3.8 (2.1, 6.8)	0.6 (0.5, 0.6)	58-83
Earlobe crease	2.3 (1.6, 3.3)	0.5 (0.4, 0.7)	60-85
Arcus senilis	3 (1.02, 8.6)	0.7 (0.6, 0.8)	89
Chest wall tenderness	0.8 (0.7, 0.9)	1.1 (1, 1.3)	44-62
Ankle-to-arm pressure index <0.9	4 (2.3, 6.9)	0.8 (0.8, 0.8)	75-82
Laterally displaced apical impulse	13 (0.7, 228.3)	1 (0.9, 1)	50
ECG normal	0.6 (0.3, 1.1)	1.2 (1, 1.6)	44-58
ECG with ST/T wave abnormalities	1.4 (1, 1.9)	0.9 (0.9, 1)	44-76
EBM BOX 49.2 MYOCARDIAL INFARCTION			
Male sex	1.3 (1.2, 1.3)	0.7 (0.7, 0.7)	6-36
Age, <40 years	0.2 (0.1, 0.5)	1.2 (1.1, 1.3)	17
Age, 40-59 years	0.8 (0.6, 1.1)	1.2 (1, 1.4)	17
Age, ≥60 years	1.5 (1.4, 1.6)	0.6 (0.5, 0.8)	14-36
Sharp pain	0.4 (0.2, 0.8)	1.3 (1.1, 1.5)	12-21

Continued

APPENDIX TABLE I Likelihood Ratios, Confidence Intervals, and Pre-Test Probability—cont'd

Finding	Positive Likelihood Ratio (95% CI)	Negative Likelihood Ratio (95% CI)	Pre-Test Probability (Range)
Pleuritic pain	0.3 (0.1, 0.6)	1.2 (1.2, 1.2)	12-21
Positional pain	0.4 (0.2, 0.9)	1.1 (1.1, 1.2)	14-21
Relief of pain with nitroglycerin	1 (0.9, 1.1)	1 (0.9, 1.2)	18-34
Levine sign	0.5 (0.2, 1.6)	1.1 (1, 1.2)	22
Palm sign	0.9 (0.5, 1.4)	1.1 (0.9, 1.4)	22
Arm sign	1.1 (0.5, 2.2)	1 (0.8, 1.2)	22
Pointing sign	0.4 (0.1, 3.5)	1 (1, 1.1)	22
Chest wall tenderness	0.3 (0.2, 0.6)	1.2 (1.1, 1.3)	12-21
Diaphoretic appearance	2.2 (1.7, 2.9)	0.7 (0.6, 0.8)	12-29
Pallor	1.4 (1.2, 1.6)	0.6 (0.5, 0.8)	29
Systolic BP <100 mm Hg	3.6 (2, 6.5)	1 (0.9, 1)	18
Jugular venous distention	2.4 (1.4, 4.2)	0.9 (0.9, 1)	6
Pulmonary crackles	2.1 (1.6, 2.8)	0.8 (0.7, 1)	6-12
Third heart sound	3.2 (1.6, 6.5)	0.9 (0.8, 1)	12
ECG normal	0.2 (0.1, 0.3)	1.5 (1.4, 1.6)	14-42
ECG nonspecific ST changes	0.2 (0.1, 0.4)	1.4 (1.1, 1.9)	14-29
ECG ST elevation	22.3 (16.7, 30)	0.6 (0.5, 0.6)	12-29
ECG ST depression	3.9 (3, 5.2)	0.8 (0.7, 0.8)	12-29
ECG T wave inversion	2 (1.5, 2.5)	0.9 (0.9, 1)	12-29
EBM BOX 49.3 PREDICTING COMPLICATIONS			
Goldman "high" risk	8.7 (4.4, 17.1)	0.5 (0.3, 0.8)	1
Goldman "very low" risk	0.1 (0.1, 0.2)	2 (1.7, 2.4)	1
CHAPTER 51 PALPATION AND PERCUSSION OF THE ABDOMEN			
Lymphadenopathy, detecting hepatic cause of splenomegaly	0.04 (0, 0.6)	1.3 (1.1, 1.4)	42
Hepatomegaly, detecting hepatic cause of splenomegaly	2.7 (1.8, 3.9)	0.4 (0.3, 0.6)	42
Massive splenomegaly, detecting hematologic cause of splenomegaly	2.1 (1.1, 3.8)	0.8 (0.7, 1)	40
EBM BOX 51.1 DETECTING ENLARGED LIVER AND SPLEEN			
Percussion span ≥10 cm, detecting enlarged liver	1.2 (1, 1.5)	0.5 (0.2, 1.7)	20-74
Palpable liver, detecting liver edge	234 (15, 3737)	0.5 (0.5, 0.6)	51
Palpable liver, detecting enlarged liver	1.9 (1.6, 2.3)	0.6 (0.5, 0.8)	20-44
Palpable spleen, detecting enlarged spleen	8.5 (6.2, 11.8)	0.5 (0.4, 0.7)	7-84
Spleen percussion sign, detecting enlarged spleen	1.7 (1.2, 2.2)	0.7 (0.5, 0.9)	26-61
Nixon method, detecting enlarged spleen	2 (1.2, 3.5)	0.7 (0.6, 0.9)	26-61

APPENDIX TABLE I Likelihood Ratios, Confidence Intervals, and Pre-Test Probability—cont'd

Finding	Positive Likelihood Ratio (95% CI)	Negative Likelihood Ratio (95% CI)	Pre-Test Probability (Range)
Traube's space dullness, detecting enlarged spleen	2.1 (1.7, 2.6)	0.8 (0.6, 0.9)	36-61
EBM BOX 51.2 PALPATION OF LIVER AND SPLEEN			
Palpable enlarged liver, detecting cirrhosis	2.3 (1.6, 3.3)	0.6 (0.4, 0.7)	7-67
Palpable liver in epigastrium, detecting cirrhosis	2.7 (1.9, 3.9)	0.3 (0.1, 0.9)	7-37
Liver edge firm, detecting cirrhosis	3.3 (2.2, 4.9)	0.4 (0.3, 0.4)	27-67
Palpable liver (in jaundiced patients), detecting hepatocellular disease	0.9 (0.8, 1.1)	1.4 (0.6, 3.4)	65-67
Liver tenderness (in jaundiced patients), detecting hepatocellular disease	1.4 (0.8, 2.6)	0.8 (0.7, 1.1)	65-67
Palpable liver (in patients with lymphadenopathy), detecting serious disease	1.2 (0.7, 1.9)	1 (0.9, 1.1)	26-41
Palpable spleen in returning travelers with fever, detecting malaria	6.5 (3.9, 10.7)	0.8 (0.8, 0.8)	27-29
Palpable spleen (in patients with jaundice), detecting hepatocellular disease	2.9 (1.2, 6.8)	0.7 (0.6, 0.9)	65-67
Palpable spleen, detecting cirrhosis	2.5 (1.6, 3.8)	0.8 (0.7, 0.9)	18-67
Palpable spleen (in patients with lymphadenopathy), detecting serious disease	1.2 (0.6, 2.5)	1 (0.9, 1)	26-41
Palpable spleen in prolonged fever, predicting that bone marrow examination will be diagnostic	2.9 (1.9, 4.4)	0.7 (0.5, 0.8)	24-45
EBM BOX 51.3 PALPATION OF GALLBLADDER, BLADDER, AND AORTA			
Palpable gallbladder (in jaundiced patients), detecting extrahepatic obstruction	26 (1.5, 439.9)	0.7 (0.5, 0.9)	33
Palpable gallbladder, detecting malignant extrahepatic obstruction	2.6 (1.5, 4.6)	0.7 (0.6, 0.9)	32-80
Palpable bladder, detecting ≥ 400 mL urine	1.9 (1.4, 2.6)	0.3 (0.1, 0.7)	29
Expansile pulsating epigastric mass, detecting abdominal aortic aneurysm	8 (4.2, 15.3)	0.6 (0.5, 0.7)	2-50

Continued

APPENDIX TABLE I Likelihood Ratios, Confidence Intervals, and Pre-Test Probability—cont'd

Finding	Positive Likelihood Ratio (95% CI)	Negative Likelihood Ratio (95% CI)	Pre-Test Probability (Range)
EBM BOX 51.4 ASCITES			
Bulging flanks	1.9 (1.4, 2.6)	0.4 (0.2, 0.6)	24-33
Edema	3.8 (2.2, 6.6)	0.2 (0, 0.6)	24
Flank dullness	1.8 (0.9, 3.4)	0.3 (0.1, 0.7)	24-29
Shifting dullness	2.3 (1.5, 3.5)	0.4 (0.2, 0.6)	24-33
Fluid wave	5 (2.5, 9.9)	0.5 (0.3, 0.7)	24-33
CHAPTER 52 ABDOMINAL PAIN AND TENDERNESS			
Sonographic McBurney's point tenderness, detecting appendicitis	8.4 (2.9, 24.6)	0.1 (0.1, 0.3)	67
Sonographic Murphy's sign, detecting cholecystitis	9.9 (5.4, 18.3)	0.4 (0.3, 0.6)	21
Murphy's sign in patients with liver abscess, detecting biliary tract sepsis	2.8 (1.1, 6.9)	0.8 (0.6, 1)	40
Left lower quadrant tenderness, detecting diverticulitis (surgery)	13.8 (6.3, 30)	0.8 (0.7, 0.9)	17
Left lower quadrant tenderness, detecting diverticulitis (CT scan)	2.2 (1.7, 2.7)	0.4 (0.3, 0.5)	43
Loin tenderness, detecting ureterolithiasis	27.7 (10.7, 72)	0.9 (0.8, 0.9)	4
Renal tenderness, detecting ureterolithiasis	3.6 (3.1, 4.1)	0.2 (0.1, 0.3)	4
Microscopic hematuria, detecting ureterolithiasis	73.1 (41.7, 128)	0.3 (0.2, 0.4)	4
Positive abdominal wall tenderness test in chronic abdominal pain, predicting improvement with local analgesic injection	7 (3.4, 14.3)	0.2 (0.1, 0.5)	35
EBM BOX 52.1 ACUTE ABDOMINAL PAIN, DETECTING PERITONITIS			
Fever	1.4 (1.2, 1.7)	0.7 (0.6, 0.8)	31-88
Guarding	2.3 (1.9, 2.8)	0.6 (0.5, 0.7)	11-88
Rigidity	3.6 (2.7, 4.8)	0.8 (0.7, 0.9)	11-75
Rebound tenderness	2 (1.7, 2.4)	0.4 (0.4, 0.5)	11-88
Percussion tenderness	2.4 (1.5, 3.8)	0.5 (0.4, 0.6)	30-50
Abnormal bowel sounds	2.2 (0.5, 9.7)	0.8 (0.7, 0.9)	13-82
Rectal tenderness	1.4 (1, 1.8)	0.8 (0.7, 1)	11-82
Positive abdominal wall tenderness test	0.1 (0, 0.7)	1.9 (0.9, 4.4)	58-72
Positive cough test	1.9 (1.5, 2.4)	0.5 (0.3, 0.6)	11-46

APPENDIX TABLE I Likelihood Ratios, Confidence Intervals, and Pre-Test Probability—cont'd

Finding	Positive Likelihood Ratio (95% CI)	Negative Likelihood Ratio (95% CI)	Pre-Test Probability (Range)
EBM BOX 52.2 ACUTE ABDOMINAL PAIN, DETECTING APPENDICITIS			
Right lower quadrant tenderness	1.9 (1.6, 2.4)	0.3 (0.2, 0.4)	11-85
McBurney's point tenderness	3.4 (1.6, 7.2)	0.4 (0.2, 0.7)	39-65
Rovsing's sign	2.3 (1.4, 3.8)	0.8 (0.6, 0.9)	36-58
Psoas sign	2 (1.4, 2.8)	0.9 (0.8, 1)	36-82
Obturator sign	1.4 (0.4, 4.5)	1 (0.9, 1.1)	82
Alvarado score, 7 or more	3.1 (2.4, 3.9)	—	17-82
Alvarado score, 5-6	0.7 (0.4, 1.3)	—	17-82
Alvarado score, 4 or less	0.1 (0, 0.2)	—	17-82
EBM BOX 52.3 RIGHT UPPER QUADRANT TENDERNESS			
Fever	1.1 (0.8, 1.7)	0.9 (0.8, 1.1)	26-78
Right upper quadrant tenderness	2.7 (1.8, 4)	0.4 (0.3, 0.6)	10-80
Murphy's sign (inspiratory arrest)	3.2 (1.6, 6.6)	0.6 (0.4, 0.8)	10-52
Right upper quadrant mass	0.8 (0.5, 1.2)	1 (1, 1)	26-80
EBM BOX 52.4 ACUTE ABDOMINAL PAIN, DETECTING OBSTRUCTION			
Visible peristalsis	18.8 (4.3, 81.9)	0.9 (0.9, 1)	4
Distended abdomen	9.6 (5, 18.6)	0.4 (0.3, 0.5)	4-8
Guarding	1 (0.6, 1.7)	1 (0.7, 1.4)	4-8
Rigidity	1.2 (0.4, 3.6)	1 (0.9, 1.2)	4-8
Rebound tenderness	0.9 (0.7, 1.1)	1.1 (1, 1.2)	4-8
Hyperactive bowel sounds	5 (2.4, 10.6)	0.6 (0.5, 0.8)	4-8
Abnormal bowel sounds	3.2 (1.7, 6.1)	0.4 (0.3, 0.5)	4-8
Rectal tenderness	0.9 (0.6, 1.5)	1 (1, 1.1)	4-8
EBM BOX 52.5 CHRONIC UPPER ABDOMINAL PAIN			
Positive abdominal wall tenderness test, detecting visceral pain	0.1 (0.1, 0.3)	4.9 (3, 8)	65
Right upper quadrant tenderness, detecting cholelithiasis	1.1 (0.9, 1.4)	0.9 (0.7, 1.2)	41
Lower abdominal tenderness, detecting cholelithiasis	0.5 (0.3, 0.7)	1.4 (1.2, 1.6)	41
Epigastric tenderness, detecting positive upper endoscopy	0.9 (0.7, 1.3)	1.2 (0.6, 2.3)	61
CHAPTER 53 AUSCULTATION OF ABDOMEN			
Abnormal bowel sounds, detecting bowel obstruction	3.2 (1.7, 6.1)	0.4 (0.3, 0.5)	4-8
EBM BOX 53.1 AUSCULTATION OF ABDOMEN			
Any abdominal bruit, detecting renovascular hypertension	5.6 (4, 7.7)	0.6 (0.5, 0.8)	18-36
Any abdominal bruit, detecting abdominal aortic aneurysm	2 (0.5, 8.6)	0.9 (0.8, 1.1)	9

Continued

APPENDIX TABLE I Likelihood Ratios, Confidence Intervals, and Pre-Test Probability—cont'd

Finding	Positive Likelihood Ratio (95% CI)	Negative Likelihood Ratio (95% CI)	Pre-Test Probability (Range)
Systolic/diastolic abdominal bruit, detecting renovascular hypertension	38.9 (9.5, 160)	0.6 (0.5, 0.7)	24
CHAPTER 54 PERIPHERAL VASCULAR DISEASE			
AAI <0.9 by palpation	5 (3.3, 7.5)	0.2 (0, 0.9)	4
Pulse oximetry positive (supine toe 2% < finger OR toe O ₂ sat decreases 2% on 12 inch elevation of foot)	30.5 (7.7, 121)	0.2 (0.1, 0.4)	31
Absent or severely diminished femoral pulse, detecting aortoiliac disease	31 (1.9, 500.6)	0.6 (0.5, 0.8)	50
Limb bruit (with preserved popliteal pulse), detecting limb stenosis	3.2 (1.2, 8.7)	0.3 (0.1, 0.6)	68
Continuous femoral bruit, detecting arteriovenous fistula	80.8 (5.1, 1273)	0.04 (0, 0.6)	23
Expansile femoral pulsation, detecting false aneurysm	13.8 (3.6, 52.7)	0.1 (0, 0.3)	44
EBM BOX 54.1 PERIPHERAL VASCULAR DISEASE			
Wounds or sores on foot	7 (3.2, 15.6)	1 (1, 1)	11
Foot color abnormally pale, red, or blue	2.8 (2.4, 3.2)	0.7 (0.7, 0.8)	9
Atrophic skin	1.7 (1.2, 2.3)	0.7 (0.5, 1)	8
Absent lower limb hair	1.7 (1.2, 2.3)	0.7 (0.6, 1)	8
Foot asymmetrically cooler	6.1 (4.2, 8.9)	0.9 (0.9, 0.9)	8
Absent femoral pulse	6.1 (3.8, 10)	0.9 (0.9, 1)	9
Both pedal pulses absent (PT and DP)	8.8 (7.6, 10.2)	0.3 (0.3, 0.4)	7-71
Limb bruit present	5.6 (4, 7.8)	0.7 (0.6, 0.8)	9-67
Capillary refill time ≥5 s	1.9 (1.2, 3.2)	0.8 (0.7, 1)	8
Venous filling time >20 s	3.6 (1.9, 6.8)	0.8 (0.7, 1)	8
EBM BOX 54.2 HYPOPERFUSION IN ICU PATIENTS			
Cool extremities in ICU patients, detecting low cardiac index	3.7 (2.1, 6.5)	0.8 (0.8, 0.9)	55
Cool extremities in septic ICU patients, detecting low cardiac index	5.2 (2.3, 12.1)	0.7 (0.6, 0.9)	47
0 of 3 findings present, detecting low cardiac index	0.5 (0.3, 0.8)	—	8
1 of 3 findings present, detecting low cardiac index	2.3 (1.6, 3.4)	—	8
All 3 findings present, detecting low cardiac index	7.5 (2.2, 25.3)	—	8

APPENDIX TABLE I Likelihood Ratios, Confidence Intervals, and Pre-Test Probability—cont'd

Finding	Positive Likelihood Ratio (95% CI)	Negative Likelihood Ratio (95% CI)	Pre-Test Probability (Range)
Limb is cool or capillary refill time >4.5 s, detecting elevated lactate	2.2 (1.6, 3)	0.5 (0.4, 0.7)	50
Limb is cool or capillary refill time >4.5 s, predicting multiorgan dysfunction	2.6 (1.9, 3.5)	0.3 (0.2, 0.5)	50
Prolonged capillary refill time, predicting major postoperative complications	12.1 (5.4, 27.1)	0.2 (0.1, 0.5)	17
Prolonged capillary refill time, predicting mortality if septic shock	4.6 (1.7, 12.8)	0.6 (0.4, 0.9)	37
Knee mottling, predicting mortality if septic shock	13.4 (1.9, 97.7)	0.6 (0.4, 0.8)	45
CHAPTER 55 THE DIABETIC FOOT			
Insensate to 5.07 monofilament, predicting amputation during 3-4 years follow-up	2.8 (1.04, 7.3)	0.3 (0.2, 0.6)	4
EBM BOX 55.1 THE DIABETIC FOOT			
Insensate to the 5.07 monofilament, predicting future foot ulceration	2.6 (1.9, 3.5)	0.5 (0.5, 0.6)	2-29
Ulcer area ≥ 2 cm ² , detecting osteomyelitis	2.2 (0.4, 11.4)	0.6 (0.2, 2.4)	52-68
Ulcer area ≥ 3 cm ² , detecting osteomyelitis	3.5 (1.6, 7.7)	0.3 (0.1, 0.6)	52
Ulcer area ≥ 4 cm ² , detecting osteomyelitis	7.3 (1.9, 28.3)	0.4 (0.2, 0.7)	52
Ulcer area ≥ 5 cm ² , detecting osteomyelitis	11 (1.6, 77.8)	0.5 (0.3, 0.8)	52
Probe-to-bone positive, detecting osteomyelitis	6 (4, 8.9)	0.2 (0.1, 0.4)	12-80
Ulcer depth > 3 mm or bone exposed, detecting osteomyelitis	3.9 (1.9, 8.1)	0.3 (0.2, 0.6)	63-68
Erythema, swelling, purulence, detecting osteomyelitis	1.8 (0.9, 3.8)	0.8 (0.6, 1)	63-68
0 findings, predicting nonhealing wound	0.5 (0.4, 0.5)	—	53
1 finding, predicting nonhealing wound	0.8 (0.8, 0.8)	—	53
2 findings, predicting nonhealing wound	1.8 (1.7, 1.8)	—	53
3 findings, predicting nonhealing wound	3.5 (3.2, 3.8)	—	53

Continued

APPENDIX TABLE I Likelihood Ratios, Confidence Intervals, and Pre-Test Probability—cont'd

Finding	Positive Likelihood Ratio (95% CI)	Negative Likelihood Ratio (95% CI)	Pre-Test Probability (Range)
CHAPTER 56 EDEMA AND DEEP VEIN THROMBOSIS			
Active cancer, detecting proximal leg DVT	2.9 (2.4, 3.6)	0.9 (0.8, 0.9)	13-34
Recent immobilization, detecting proximal leg DVT	1.6 (1.3, 2.1)	0.9 (0.8, 0.9)	13-34
Recent surgery, detecting proximal leg DVT	1.6 (1.3, 1.9)	0.9 (0.9, 1)	13-29
Modified Wells ≤ 0 , detecting proximal DVT	0.3 (0.1, 0.6)	1.7 (1.6, 1.9)	15-18
Modified Wells 1-2, detecting proximal DVT	1 (0.9, 1.2)	1 (0.9, 1.1)	15-18
Modified Wells ≥ 3 , detecting proximal DVT	3.9 (3.2, 4.8)	0.6 (0.5, 0.7)	15-18
Modified Wells < 2 , detecting proximal DVT	0.3 (0.2, 0.4)	2.1 (1.9, 2.4)	15
Modified Wells ≥ 2 , detecting proximal DVT	2.1 (1.9, 2.4)	0.3 (0.2, 0.4)	15
EBM BOX 56.1 LEG DVT			
Any calf or ankle swelling	1.2 (1.1, 1.3)	0.7 (0.6, 0.8)	25-54
Asymmetric calf swelling, ≥ 2 cm difference	2.1 (1.8, 2.5)	0.5 (0.4, 0.7)	13-16
Swelling of entire leg	1.5 (1.2, 1.8)	0.8 (0.6, 0.9)	22-34
Superficial venous dilation	1.6 (1.4, 1.9)	0.9 (0.8, 0.9)	22-44
Erythema	1 (0.6, 1.7)	1 (0.8, 1.2)	27-45
Superficial thrombophlebitis	0.9 (0.2, 5.1)	1 (0.9, 1.1)	43
Tenderness	1 (1, 1.1)	1 (0.9, 1.1)	22-54
Asymmetric skin coolness	1.2 (0.6, 2.2)	0.9 (0.6, 1.4)	46
Asymmetric skin warmth	1.4 (1.2, 1.7)	0.7 (0.5, 1.2)	27-45
Palpable cord	1.1 (0.7, 1.6)	1 (0.9, 1.1)	27-34
Homan's sign	1.1 (0.9, 1.3)	1 (0.9, 1.1)	27-58
EBM BOX 56.2 LEG DVT			
Wells low probability	0.2 (0.2, 0.3)	—	13-43
Wells moderate probability	1 (0.7, 1.3)	—	13-39
Wells high probability	5.9 (3.8, 9.3)	—	10-39
EBM BOX 56.3, ARM DVT			
Constant score, 0 or 1	0.3 (0.1, 0.8)	—	25-35
Constant score ≥ 2	3 (1.9, 4.8)	—	25-35
CHAPTER 57 EXAMINATION OF THE MUSCULOSKELETAL SYSTEM			
Constant pain in low back and buttock, detecting hip osteoarthritis	6.7 (2.4, 18.6)	0.5 (0.3, 0.8)	29
Pain in ipsilateral groin, detecting hip osteoarthritis	3.6 (1.1, 11.6)	0.8 (0.6, 1)	29

APPENDIX TABLE I Likelihood Ratios, Confidence Intervals, and Pre-Test Probability—cont'd

Finding	Positive Likelihood Ratio (95% CI)	Negative Likelihood Ratio (95% CI)	Pre-Test Probability (Range)
Knee flexion < 120 degrees, detecting knee arthritis	3.4 (1.5, 8)	0.9 (0.8, 1)	8
Overall clinical impression, detecting ACL tear	49.6 (29.1, 84.7)	0.1 (0, 0.2)	11-43
Clinical impression medial meniscal injury, detecting medial meniscal injury	3.4 (2.2, 5.3)	0.1 (0.1, 0.2)	19-66
Clinical impression lateral meniscal injury, detecting lateral meniscal injury	8.6 (4.4, 16.9)	0.5 (0.4, 0.6)	7-47
EBM BOX 57.1 SHOULDER PAIN			
Detecting Acromioclavicular Joint Pain			
Acromioclavicular joint tenderness	1.1 (0.9, 1.3)	0.4 (0, 5.2)	74
Tenderness with AC joint compression	1.6 (0.8, 3)	0.4 (0.2, 1.1)	74
Crossed body adduction causes pain	3.7 (2.9, 4.7)	0.3 (0.2, 0.5)	6
Detecting Rotator Cuff Tendinitis			
Neer impingement sign	1.6 (1.2, 2.3)	0.5 (0.4, 0.5)	28-90
Hawkins impingement sign	1.7 (1.2, 2.3)	0.3 (0.2, 0.5)	28-90
Neer or Hawkins impingement sign	1.6 (1.3, 2)	0.1 (0, 0.7)	28
Yergason sign	2.8 (1.2, 6.6)	0.7 (0.6, 0.9)	70
Speed test	1.9 (1.3, 2.8)	0.7 (0.6, 0.9)	65-70
Painful arc	2.9 (1.6, 5.3)	0.5 (0.3, 1.1)	65-90
Detecting Rotator Cuff Tear			
Age ≤39 years	0.1 (0.1, 0.2)	—	50
Age 40-59 years	0.9 (0.7, 1.1)	—	50
Age ≥60 years	3.2 (2.4, 4.3)	—	50
Supraspinatus atrophy	2 (1.5, 2.7)	0.6 (0.5, 0.7)	67
Infraspinatus atrophy	2 (1.5, 2.7)	0.6 (0.5, 0.7)	67
Painful arc	1.6 (0.97, 2.8)	0.5 (0.3, 0.8)	38-67
Neer impingement sign	1.7 (1.04, 2.7)	0.6 (0.3, 1)	28-39
Hawkins impingement sign	1.6 (1.2, 2.1)	0.6 (0.5, 0.7)	28-39
Supraspinatus test causes pain	1.7 (1.3, 2.2)	0.4 (0.2, 0.7)	24-69
Supraspinatus test reveals weakness	2 (1.5, 2.8)	0.6 (0.4, 0.7)	23-72
Infraspinatus weakness	2.6 (1.5, 4.6)	0.6 (0.4, 0.9)	39-67
Dropped arm test	2.9 (2.1, 4)	0.9 (0.8, 1)	38-50
Palpable tear	10.2 (1.3, 80.9)	0.1 (0, 0.2)	42-81

Continued

APPENDIX TABLE I Likelihood Ratios, Confidence Intervals, and Pre-Test Probability—cont'd

Finding	Positive Likelihood Ratio (95% CI)	Negative Likelihood Ratio (95% CI)	Pre-Test Probability (Range)
EBM BOX 57.2 ROTATOR CUFF TEAR			
3 findings (Murrell)	48 (6.7, 344.4)	—	50
2 findings (Murrell)	4.9 (2.9, 8.3)	—	50
1 finding (Murrell)	0.9 (0.7, 1.1)	—	50
0 findings (Murrell)	0.02 (0, 0.1)	—	50
3 findings (Park)	15.9 (5.9, 43.1)	—	44
2 findings (Park)	3.6 (2.2, 5.7)	—	44
1 finding (Park)	0.8 (0.6, 1.1)	—	44
0 findings (Park)	0.2 (0.1, 0.3)	—	44
EBM BOX 57.3 HIP OSTEOARTHRITIS			
Squat causes pain in posterior hip	6.1 (1.3, 28.9)	0.8 (0.6, 1)	29
Abduction or adduction causes groin pain	5.7 (1.6, 19.8)	0.7 (0.5, 1)	29
Active hip flexion causes lateral hip pain	3.6 (1.5, 9)	0.6 (0.4, 1)	29
Active hip extension causes hip pain	2.7 (1.3, 5.3)	0.6 (0.4, 0.9)	29
Passive internal rotation ≤25 degrees	1.9 (1.3, 2.9)	0.4 (0.2, 0.9)	29
Passive internal rotation ≤15 degrees	9.9 (5.5, 17.7)	0.6 (0.5, 0.8)	6
EBM BOX 55.4 KNEE OSTEOARTHRITIS			
Stiffness <30 min	3 (2.1, 4.4)	0.2 (0.1, 0.3)	55
Crepitus, passive motion	2.1 (1.7, 2.7)	0.2 (0.1, 0.3)	52
Bony enlargement	11.8 (4.9, 28.2)	0.5 (0.4, 0.6)	52
Palpable increase in temperature	0.3 (0.2, 0.5)	1.6 (1.4, 2)	52
Valgus deformity	1.4 (0.8, 2.4)	0.9 (0.8, 1)	52
Varus deformity	3.4 (1.6, 7.6)	0.8 (0.7, 0.9)	52
At least 3 out of 6 findings	3.1 (2.3, 4.1)	0.1 (0, 0.1)	55
EBM BOX 57.5 KNEE FRACTURE			
Age ≥55 years	3 (1.6, 5.3)	0.7 (0.5, 1)	6-9
Joint effusion	2.5 (2, 3)	0.5 (0.3, 0.7)	6-9
Ecchymosis	2.2 (0.9, 5.3)	0.9 (0.7, 1.1)	9
Cannot flex beyond 90 degrees	2.9 (2.5, 3.4)	0.5 (0.4, 0.7)	6-9
Cannot flex beyond 60 degrees	4.7 (3.8, 5.9)	0.6 (0.5, 0.7)	6
Isolated tenderness of patella	2.2 (1.6, 2.9)	0.8 (0.8, 0.9)	6-9
Tenderness at head of fibula	3.4 (2.5, 4.7)	0.9 (0.8, 1)	6-9
Inability to bear weight, immediately and in emergency department	3.6 (3, 4.3)	0.6 (0.5, 0.7)	6-9
Ottawa knee rule positive	1.7 (1.4, 2)	0.1 (0, 0.2)	6-12

APPENDIX TABLE I Likelihood Ratios, Confidence Intervals, and Pre-Test Probability—cont'd

Finding	Positive Likelihood Ratio (95% CI)	Negative Likelihood Ratio (95% CI)	Pre-Test Probability (Range)
EBM BOX 57.6 LIGAMENT AND MENISCAL INJURIES			
Anterior drawer sign, detecting ACL tear	13.6 (5.9, 31.5)	0.4 (0.3, 0.6)	26-76
Lachman's sign, detecting ACL tear	19.5 (6.6, 57.8)	0.2 (0.1, 0.4)	26-76
Pivot shift sign, detecting ACL tear	8.8 (4.2, 18.4)	0.7 (0.5, 0.9)	26-76
Posterior drawer sign, detecting PCL tear	97.8 (24.2, 396)	0.1 (0, 0.5)	3-13
McMurray sign, detecting meniscal injury	4 (2.5, 6.3)	0.6 (0.4, 0.7)	35-85
Joint line tenderness, detecting meniscal injury	1.8 (1.2, 2.7)	0.5 (0.3, 0.7)	31-81
Block to full extension, detecting meniscal injury	3.2 (1.8, 5.9)	0.7 (0.5, 0.8)	50
Pain on forced extension, detecting meniscal injury	1.6 (1.2, 2.2)	0.7 (0.6, 0.9)	50-81
Valgus laxity, detecting medial collateral ligament injury	7.7 (1.6, 37)	0.2 (0.1, 0.3)	22-44
Varus laxity, detecting lateral collateral ligament injury	16.2 (2.4, 109.1)	0.8 (0.4, 1.3)	1
EBM BOX 57.7 ANKLE AND MIDFOOT FRACTURE			
Detecting Ankle Fracture			
Tenderness over posterior lateral malleolus	2.4 (1.9, 2.8)	0.4 (0.3, 0.5)	10-14
Tenderness over posterior medial malleolus	4.8 (2.6, 9)	0.6 (0.6, 0.7)	10-14
Inability to bear weight immediately after injury	2.6 (2.2, 3.1)	0.5 (0.4, 0.6)	10-14
Inability to bear weight four steps in the emergency room	2.5 (2.2, 2.8)	0.3 (0.2, 0.4)	10-14
Ottawa ankle rule	1.5 (1.3, 1.7)	0.1 (0, 0.1)	9-16
Detecting Midfoot Fracture			
Tenderness at the base of the fifth metatarsal	2.9 (2.5, 3.3)	0.1 (0.1, 0.2)	12-14
Tenderness of navicular bone	0.4 (0.2, 0.9)	1.1 (1, 1.2)	12-14
Inability to bear weight immediately after injury	1 (0.5, 2.3)	1 (0.8, 1.3)	12-14
Inability to bear weight four steps in the emergency room	1.1 (0.8, 1.4)	0.9 (0.8, 1.1)	12-14
Ottawa foot rule	2.1 (1.3, 3.3)	0.1 (0, 0.2)	2-23

Continued

APPENDIX TABLE I Likelihood Ratios, Confidence Intervals, and Pre-Test Probability—cont'd			
Finding	Positive Likelihood Ratio (95% CI)	Negative Likelihood Ratio (95% CI)	Pre-Test Probability (Range)
EBM BOX 57.8 ACHILLES TENDON TEAR			
Palpable gap in Achilles tendon	6.8 (2.3, 19.9)	0.3 (0.2, 0.4)	83
Calf squeeze test	13.5 (3.5, 51.2)	0.05 (0, 0.1)	83
Matles test	6.2 (2.5, 15.4)	0.1 (0.1, 0.3)	73
CHAPTER 58 VISUAL FIELD TESTING			
Visual field defect, detecting focal cerebral defect	4.3 (1.1, 17.6)	0.8 (0.7, 0.9)	71-75
EBM BOX 58.1 VISUAL FIELD DEFECTS			
Confrontation technique, detecting anterior visual field defects	5.7 (3.7, 8.7)	0.7 (0.6, 0.8)	26-85
Confrontation technique, detecting posterior visual field defects	9.6 (3.9, 23.8)	0.4 (0.3, 0.6)	11-53
Asymmetric optokinetic nystagmus, detecting parietal lobe disease	5.7 (3.2, 10.1)	0.1 (0, 0.3)	33
Associated hemiparesis or aphasia, detecting parietal lobe disease	18.3 (6, 56.2)	0.1 (0, 0.7)	14
EBM BOX 58.2 VISUAL FIELD DEFECTS			
Finger counting	54.4 (7.6, 388)	0.7 (0.6, 0.8)	45-64
Kinetic finger boundary	13.3 (5.9, 29.8)	0.6 (0.6, 0.7)	45-64
Description of face	26.4 (8.5, 82.6)	0.6 (0.5, 0.7)	45-64
Kinetic red boundary testing	13.6 (3.6, 50.7)	0.4 (0.2, 0.6)	45-64
Laser target testing	6.3 (3.4, 12)	0.3 (0.2, 0.5)	47
Red target comparison	6.2 (0.1, 314)	0.6 (0.3, 1.2)	45-64
CHAPTER 59 NERVES OF THE EYE MUSCLES			
Positive upright-supine test, detecting skew deviation	73.8 (4.4, 1227)	0.6 (0.5, 0.9)	20
EBM BOX 59.1 ICE PACK TEST FOR MYASTHENIA			
Improvement in ptosis after application of ice	8.3 (4.8, 14.6)	0.2 (0.1, 0.2)	32-75
Improvement in diplopia and ophthalmoplegia after application of ice	30.6 (7.7, 123)	0.1 (0, 0.9)	18-50
CHAPTER 60 MISCELLANEOUS CRANIAL NERVES			
Hutchinson's sign in VZV, detecting ocular complications	3.3 (2.3, 4.8)	0.3 (0.2, 0.6)	48-86
EBM BOX 60.1 ASPIRATION AFTER STROKE			
Abnormal voluntary cough	1.9 (1.3, 2.7)	0.6 (0.5, 0.7)	19-71
Dysphonia	1.5 (1.2, 1.8)	0.5 (0.4, 0.7)	24-71

APPENDIX TABLE 1 Likelihood Ratios, Confidence Intervals, and Pre-Test Probability—cont'd

Finding	Positive Likelihood Ratio (95% CI)	Negative Likelihood Ratio (95% CI)	Pre-Test Probability (Range)
Dysarthria	1.6 (1.2, 2.2)	0.5 (0.3, 0.8)	37-68
Drowsiness	3.4 (1.2, 9.5)	0.5 (0.3, 0.7)	21-42
Abnormal sensation face and tongue	0.5 (0.2, 1.2)	1.5 (0.9, 2.4)	46
Absent pharyngeal sensation	2.4 (1.6, 3.6)	0.03 (0, 0.5)	42
Tongue weakness	1.8 (0.998, 3.2)	0.6 (0.5, 0.9)	18-30
Bilateral cranial nerve signs	1.1 (0.8, 1.6)	0.8 (0.4, 1.6)	51-52
Abnormal gag reflex	1.4 (1.2, 1.7)	0.6 (0.5, 0.8)	19-71
Water swallow test	3.2 (2.1, 4.7)	0.4 (0.3, 0.5)	19-52
Oxygen desaturation 0-2 min after swallowing	3.1 (1.1, 8.6)	0.3 (0.2, 0.5)	28-52
CHAPTER 61 EXAMINATION OF THE MOTOR SYSTEM: APPROACH TO WEAKNESS			
Ipsilateral calf wasting, diagnosing lumbosacral radiculopathy	5.2 (1.3, 20.8)	0.8 (0.6, 0.9)	74
EBM BOX 61.1 UNILATERAL CEREBRAL HEMISPHERIC DISEASE			
Hemianopia	4.3 (1.1, 17.6)	0.8 (0.7, 0.9)	71-75
Pronator drift	9.6 (5.4, 16.9)	0.3 (0.2, 0.7)	51-76
Arm rolling test	15.6 (5.8, 41.5)	0.6 (0.4, 0.8)	51-76
Index finger rolling test	6 (2, 18.5)	0.7 (0.6, 0.8)	67-71
Little finger rolling test	1.5 (0.1, 15.2)	1 (0.9, 1.1)	58
Finger tapping test	4.7 (2.1, 10.3)	0.5 (0.3, 0.8)	51-76
Foot tapping test	2 (0.6, 6.5)	0.9 (0.7, 1.1)	67-71
Hemisensory disturbance	12.3 (0.8, 196)	0.7 (0.6, 0.9)	76
Hyperreflexia	5.3 (3, 9.5)	0.6 (0.2, 1.5)	51-71
Babinski response	8.5 (1.7, 43.3)	0.8 (0.6, 1)	67-76
EBM BOX 61.2 LOCALIZATION OF STROKE			
Aphasia, detecting anterior stroke	19.1 (6.7, 54.5)	0.8 (0.8, 0.8)	74
Conjugate gaze palsy, detecting anterior stroke	3.9 (2, 7.8)	0.9 (0.9, 0.9)	74
Ataxia, detecting posterior stroke	5.8 (4.2, 8)	0.7 (0.7, 0.8)	26
Horner syndrome, detecting posterior stroke	72 (4.3, 1212.9)	1 (0.9, 1)	26
Hemianopia, detecting posterior stroke	3.4 (1.6, 7.3)	1 (0.9, 1)	26
Heterotropia, detecting posterior stroke	10 (4.2, 23.6)	0.9 (0.9, 1)	26
Nystagmus, detecting posterior stroke	14 (6.5, 30.4)	0.9 (0.9, 0.9)	26
Crossed motor paresis, detecting posterior stroke	24 (4.4, 129.9)	1 (0.9, 1)	26

Continued

APPENDIX TABLE I Likelihood Ratios, Confidence Intervals, and Pre-Test Probability—cont'd			
Finding	Positive Likelihood Ratio (95% CI)	Negative Likelihood Ratio (95% CI)	Pre-Test Probability (Range)
Crossed sensory findings, detecting posterior stroke	54.7 (3.2, 937.8)	1 (0.9, 1)	26
CHAPTER 62 EXAMINATION OF THE SENSORY SYSTEM			
Diminished pinprick sensation, detecting nerve fiber density <8 epidermal nerve fibers/mm	4.6 (2.4, 8.6)	0.2 (0.1, 0.3)	60
CHAPTER 63 EXAMINATION OF THE REFLEXES			
Diminished biceps or brachioradialis reflex, detecting C6 radiculopathy	14.2 (4.3, 46.7)	0.5 (0.3, 0.8)	19
Diminished triceps reflex, detecting C7 radiculopathy	3 (1.6, 5.6)	0.6 (0.3, 1.4)	54-69
Asymmetric quadriceps reflex, detecting L3 or L4 radiculopathy	8.5 (5, 14.5)	0.7 (0.6, 0.8)	2-46
Abnormal medial hamstring reflex, detecting L5 root disease	6.2 (1.6, 24.2)	0.5 (0.3, 0.7)	58
Asymmetric Achilles reflex, detecting S1 radiculopathy	2.7 (1.9, 3.8)	0.5 (0.4, 0.6)	20-66
Diminished Achilles reflex, detecting diabetic peripheral neuropathy	2.8 (2.1, 3.8)	0.1 (0.1, 0.3)	39
Bulbocavernosus reflex in men, detecting S2-S4 lesion	13 (5.9, 28.9)	0.3 (0.2, 0.5)	27
Bulbocavernosus reflex in women, detecting S2-S4 lesion	2.7 (1.6, 4.6)	0.6 (0.5, 0.9)	22
Babinski sign, detecting focal cerebral lesion	8.5 (1.7, 43.3)	0.8 (0.6, 1)	67-76
Positive grasp reflex, detecting discrete lesion in the frontal lobe, deep nuclei, or subcortical white matter	19.1 (5.9, 61.7)	0.7 (0.4, 1.2)	21-37
CHAPTER 64 DISORDERS OF NERVE ROOTS, PLEXUSES, AND PERIPHERAL NERVES			
Motor and sensory findings confined to C7-T1, detecting malignant plexopathy	30.9 (2, 483.8)	0.3 (0.2, 0.5)	61
Horner syndrome, detecting malignant plexopathy	4.1 (1.4, 12.2)	0.5 (0.3, 0.8)	61
Motor and sensory findings confined to C5C6, detecting radiation plexopathy	8.8 (2.9, 26.4)	0.2 (0.1, 0.5)	39
Lymphedema of arm, detecting radiation plexopathy	4.9 (2.1, 11.6)	0.3 (0.2, 0.6)	39

APPENDIX TABLE 1 Likelihood Ratios, Confidence Intervals, and Pre-Test Probability—cont'd

Finding	Positive Likelihood Ratio (95% CI)	Negative Likelihood Ratio (95% CI)	Pre-Test Probability (Range)
Weak hip abduction if foot drop, detecting lumbosacral radiculopathy	24 (3.5, 165.8)	0.1 (0.1, 0.4)	43
Unilateral involvement, detecting malignant lumbosacral plexopathy	4.5 (1.8, 10.8)	0.1 (0, 0.4)	58
Bilateral involvement, detecting radiation lumbosacral plexopathy	7.5 (2.5, 22.2)	0.2 (0.1, 0.5)	42
EBM BOX 64.1 DIAGNOSING CERVICAL RADICULOPATHY			
Weakness of any arm muscle	1.9 (1.4, 2.5)	0.4 (0.3, 0.6)	52
Reduced sensation in arm	0.7 (0.5, 1)	1.4 (1, 1.8)	52
Reduced biceps reflex	9.1 (1.2, 69.4)	0.9 (0.8, 1)	52
Reduced brachioradialis reflex	7.3 (0.9, 56.8)	0.9 (0.9, 1)	52
Reduced triceps reflex	2.3 (0.7, 7)	0.9 (0.9, 1)	52
Reduced biceps, triceps, or brachioradialis reflex	3.6 (1.4, 9.2)	0.8 (0.7, 0.9)	52
Spurling test	4.5 (3, 6.8)	0.6 (0.4, 0.8)	10-77
Rotation of neck to involved side <60 degrees	1.7 (1.3, 2.3)	0.2 (0.1, 0.9)	22
EBM BOX 64.2 LOCALIZING CERVICAL RADICULOPATHY			
Weak elbow flexion, detecting C5 radiculopathy	5.3 (2.7, 10.5)	0.2 (0, 2.5)	2
Weak wrist extension, detecting C6 radiculopathy	2.3 (1.1, 5)	0.8 (0.5, 1.1)	19
Weak elbow extension, detecting C7 radiculopathy	4 (1.8, 9.2)	0.4 (0.3, 0.6)	69
Weak finger flexion, detecting C8 radiculopathy	3.8 (1.7, 8.5)	0.6 (0.3, 1.1)	10
Sensory loss of thumb, detecting C6 radiculopathy	8.5 (2.3, 31.1)	0.7 (0.5, 1)	19
Sensory loss of middle finger, detecting C7 radiculopathy	3.2 (0.2, 60.1)	1 (0.9, 1)	69
Sensory loss of little finger, detecting C8 radiculopathy	41.4 (2.1, 807)	0.8 (0.6, 1.1)	10
Diminished biceps or brachioradialis reflex, detecting C6 radiculopathy	14.2 (4.3, 46.7)	0.5 (0.3, 0.8)	19
Diminished triceps reflex, detecting C7 radiculopathy	3 (1.6, 5.6)	0.6 (0.3, 1.4)	54-69
EBM BOX 64.3 CARPAL TUNNEL SYNDROME			
"Classic" or "probable" Katz hand diagram	2.4 (1.6, 3.5)	—	37
"Unlikely" Katz hand diagram	0.2 (0, 0.7)	—	37
Weak thumb abduction	1.8 (1.4, 2.3)	0.5 (0.4, 0.7)	50-62

Continued

APPENDIX TABLE I Likelihood Ratios, Confidence Intervals, and Pre-Test Probability—cont'd

Finding	Positive Likelihood Ratio (95% CI)	Negative Likelihood Ratio (95% CI)	Pre-Test Probability (Range)
Thenar atrophy	1.7 (1.03, 2.9)	0.9 (0.9, 1)	35-74
Hypalgesia	3.1 (2, 5.1)	0.7 (0.5, 1.1)	35-62
Diminished two-point discrimination	1.3 (0.6, 2.7)	1 (0.9, 1.1)	40-57
Abnormal vibration sensation	1.6 (0.8, 3)	0.8 (0.4, 1.3)	50-57
Diminished monofilament sensation	1.2 (1, 1.5)	0.4 (0.1, 2)	53-56
Tinel sign	1.4 (1.1, 1.9)	0.9 (0.7, 1)	35-75
Phalen sign	1.3 (1.1, 1.5)	0.7 (0.6, 0.9)	35-88
Pressure provocation test	1 (0.9, 1.2)	0.9 (0.8, 1.1)	58-88
Square wrist ratio	2.7 (2.2, 3.4)	0.5 (0.4, 0.8)	60-62
Flick sign	5.5 (0.4, 77.4)	0.3 (0, 2.8)	54-67
EBM BOX 64.4 DIAGNOSING LUMBOSACRAL RADICULOPATHY			
Weak ankle dorsiflexion	4.9 (1.9, 12.5)	0.5 (0.4, 0.7)	74
Ipsilateral calf wasting	5.2 (1.3, 20.8)	0.8 (0.6, 0.9)	74
Leg sensation abnormal	1.1 (0.9, 1.5)	0.9 (0.8, 1.1)	47-74
Abnormal ankle jerk	2.1 (1.4, 3.1)	0.8 (0.7, 0.9)	47-74
Straight-leg raising maneuver	1.5 (1.2, 1.9)	0.4 (0.3, 0.6)	47-87
Crossed straight-leg raising maneuver	3.4 (1.8, 6.4)	0.8 (0.7, 0.9)	55-87
EBM BOX 64.5 LOCALIZING LUMBOSACRAL RADICULOPATHY			
Weak knee extension, detecting L3 or L4 radiculopathy	4 (2.2, 7.2)	0.6 (0.5, 0.8)	25-63
Weak hallux extension, detecting L5 radiculopathy	1.7 (1.2, 2.6)	0.7 (0.5, 0.9)	52-57
Weak ankle dorsiflexion, detecting L5 radiculopathy	1.3 (0.9, 1.8)	0.8 (0.6, 1)	52-58
Weak ankle plantarflexion, detecting S1 radiculopathy	4.8 (0.4, 60.4)	0.7 (0.6, 0.9)	20-48
Ipsilateral calf wasting, detecting S1 radiculopathy	2.4 (1.2, 4.7)	0.7 (0.5, 0.9)	48
Sensory loss L5 distribution, detecting L5 radiculopathy	3.1 (1.8, 5.6)	0.8 (0.7, 0.9)	52-58
Sensory loss S1 distribution, detecting S1 radiculopathy	2.4 (1.3, 4.2)	0.7 (0.6, 0.9)	41-48
Asymmetric quadriceps reflex, detecting L3 or L4 radiculopathy	8.5 (5, 14.5)	0.7 (0.6, 0.8)	2-46
Asymmetric medial hamstring reflex, detecting L5 radiculopathy	6.2 (1.6, 24.2)	0.5 (0.3, 0.7)	58
Asymmetric Achilles reflex, detecting S1 radiculopathy	2.7 (1.9, 3.8)	0.5 (0.4, 0.6)	20-66
Femoral stretch test, detecting L2-4 radiculopathy	31.2 (1.9, 498.9)	0.5 (0.3, 0.7)	46

APPENDIX TABLE I Likelihood Ratios, Confidence Intervals, and Pre-Test Probability—cont'd

Finding	Positive Likelihood Ratio (95% CI)	Negative Likelihood Ratio (95% CI)	Pre-Test Probability (Range)
CHAPTER 66 TREMOR AND PARKINSON DISEASE			
Feet suddenly freezing in doorway, detecting Parkinson disease	4.4 (1.5, 12.4)	0.7 (0.5, 1)	28-32
Voice becoming softer, detecting Parkinson disease	3.2 (1.8, 5.8)	0.5 (0.1, 1.9)	28-32
Micrographia, detecting Parkinson disease	2.7 (1.8, 4)	0.7 (0.3, 1.3)	28-32
Positive bicycle sign, detecting Parkinson disease	0.1 (0, 0.3)	2 (1.6, 2.7)	41
Acute onset parkinsonism, detecting vascular parkinsonism	21.9 (3, 161.8)	0.7 (0.6, 0.9)	24-58
EBM BOX 66.1 SUSPECTED PARKINSON DISEASE			
Diagnosing Parkinson Disease			
Unable to perform perfect 10 tandem steps	0.2 (0.1, 0.7)	5.4 (3.2, 9.2)	42-63
Asymmetric arm swing	2.7 (1.2, 6.4)	0.5 (0.4, 0.8)	74
Positive applause sign	0.3 (0.2, 0.5)	2.4 (1.8, 3.1)	29-82
3 of 3 cardinal features present	2.2 (1.2, 4.2)	0.5 (0.3, 0.7)	76
3 of 3 cardinal features, asymmetry	4.1 (1.7, 10.2)	0.4 (0.3, 0.6)	76
Good response to levodopa	4.1 (1.1, 15.7)	0.2 (0.1, 0.2)	38-40
Detecting Multisystem Atrophy			
Rapid progression	2.5 (1.6, 4.1)	0.6 (0.4, 0.8)	20-55
Absence of tremor	1.4 (1, 2)	0.7 (0.5, 1.1)	15-55
Speech and/or bulbar signs	4.1 (2.7, 6.1)	0.2 (0.1, 0.4)	28
Autonomic dysfunction	4.3 (2.3, 7.8)	0.3 (0.2, 0.4)	15-55
Cerebellar signs	9.5 (1.4, 64.7)	0.7 (0.5, 0.8)	15-27
Pyramidal tract signs	4 (1.2, 12.8)	0.7 (0.4, 1)	15-27
Dementia	0.3 (0.2, 0.6)	1.9 (1.5, 2.4)	15-27
Diagnosing Progressive Supranuclear Palsy			
Downgaze palsy and early postural instability	18 (4.5, 72)	0.6 (0.5, 0.7)	29-68
Detecting Vascular Parkinsonism			
Pyramidal tract signs	21.3 (9.3, 48.5)	0.5 (0.4, 0.8)	20-58
Lower body parkinsonism	6.1 (4.3, 8.7)	0.4 (0.3, 0.5)	20-58
CHAPTER 67 HEMORRHAGIC VS. ISCHEMIC STROKE			
Seizures at onset	4.7 (1.6, 14.1)	0.9 (0.9, 1)	12-39
Vomiting	3 (1.7, 5.5)	0.7 (0.6, 0.9)	16-46
Severe headache	2.9 (1.7, 4.8)	0.7 (0.6, 0.8)	12-46
Loss of consciousness	2.6 (1.6, 4.2)	0.7 (0.5, 0.8)	43
Previous TIA	0.3 (0.2, 0.7)	1.2 (1.1, 1.3)	12-17

Continued

APPENDIX TABLE I Likelihood Ratios, Confidence Intervals, and Pre-Test Probability—cont'd

Finding	Positive Likelihood Ratio (95% CI)	Negative Likelihood Ratio (95% CI)	Pre-Test Probability (Range)
EBM BOX 67.1 HEMORRHAGIC STROKE			
Systolic BP >220 mm Hg	4 (1.1, 15.4)	0.9 (0.7, 1.1)	13
Systolic BP <160 mm Hg	0.4 (0.3, 0.6)	2.4 (1.7, 3.5)	43
Mental status coma	6.3 (3.4, 11.7)	—	12-48
Mental status drowsy	1.7 (1.2, 2.4)	—	12-48
Mental status alert	0.5 (0.3, 0.7)	—	16-48
Neurologic deterioration during first 3 h	5.8 (4.3, 7.8)	0.2 (0.2, 0.4)	18
Kernig's or Brudzinski's sign	2.9 (0.6, 14.1)	1 (0.9, 1.1)	18-46
Neck stiffness	5.4 (2.5, 11.3)	0.7 (0.7, 0.9)	18-59
Babinski present, bilateral toes	2.4 (1.6, 3.6)	—	17-43
Babinski present, single toe	1 (0.9, 1.2)	—	17-43
Babinski absent, both toes	0.5 (0.3, 0.9)	—	17-43
Deviation of eyes	1.9 (1.6, 2.3)	0.7 (0.5, 0.9)	15-17
Hemiparesis	0.9 (0.8, 1.1)	1.2 (0.8, 1.7)	12-19
Aphasia	1.1 (0.9, 1.3)	1 (0.9, 1)	14-53
Hemisensory disturbance	1.3 (1.2, 1.4)	0.8 (0.7, 1.1)	12-17
Hemianopia	1.3 (1.1, 1.6)	0.9 (0.8, 1)	16
Ataxia	0.7 (0.5, 1)	1.1 (1, 1.1)	16
Cervical bruit	0.1 (0, 0.4)	1.1 (1, 1.3)	16-43
Atrial fibrillation, ECG	0.3 (0.1, 0.5)	1.3 (1.1, 1.4)	12-19
EBM BOX 67.2 HEMORRHAGIC STROKE			
Siriraj score "hemorrhage" (>1)	5.5 (4.4, 7)	—	13-69
Siriraj score "uncertain" (−1 to 1)	1.1 (0.9, 1.2)	—	13-69
Siriraj score "infarction" (<−1)	0.3 (0.3, 0.4)	—	13-69
CHAPTER 68 ACUTE VERTIGO			
Head impulse test positive (corrective saccades), detecting abnormal caloric testing	6.7 (3.7, 12.1)	0.6 (0.5, 0.8)	19-52
Ophthalmoparesis, detecting stroke if dizzy	70 (8, 614.9)	0.9 (0.8, 1)	5
Visual field defect, detecting stroke if dizzy	17.5 (1.1, 275.8)	1 (0.9, 1)	5
Dysarthria, detecting stroke if dizzy	10 (3, 33)	0.9 (0.9, 1)	5
Focal weakness, detecting stroke if dizzy	9.6 (2.9, 31.9)	0.6 (0.3, 1.2)	3-5
Limb ataxia, detecting stroke if dizzy	9.2 (4.5, 18.7)	0.8 (0.7, 0.9)	5

APPENDIX TABLE I Likelihood Ratios, Confidence Intervals, and Pre-Test Probability—cont'd

Finding	Positive Likelihood Ratio (95% CI)	Negative Likelihood Ratio (95% CI)	Pre-Test Probability (Range)
Focal sensory disturbance, detecting stroke if dizzy	7 (2.4, 20.1)	0.8 (0.7, 1.1)	3-5
Acute infarct on MRI DWI, detecting ischemic stroke	44.2 (2.8, 690)	0.2 (0.1, 0.3)	75
EBM BOX 68.1 ACUTE VERTIGO, DETECTING ISCHEMIC STROKE			
Severe truncal ataxia	17.9 (1.1, 283)	0.7 (0.6, 0.8)	75
Skew deviation present	5.3 (1.9, 15.2)	0.7 (0.6, 0.9)	50-73
Saccadic "smooth" pursuit	4.6 (2.5, 8.4)	0.2 (0.1, 0.5)	50-52
Direction-changing nystagmus	3.5 (1.8, 6.7)	0.7 (0.5, 0.9)	50-75
Normal head impulse test (i.e., no corrective saccade)	9.6 (3.9, 23.9)	0.2 (0.1, 0.7)	50-75
Combined findings, 1 or more	10.8 (3.7, 31.6)	0.02 (0, 0.1)	50-75
EBM BOX 69.1 NON-ORGANIC NEUROLOGIC DISEASE			
Chair test positive	17 (1.1, 256.6)	0.2 (0, 0.7)	50
Knee-lift test positive	7.1 (1.6, 31.5)	0.04 (0, 0.6)	58
Drift without pronation	11.4 (3.5, 37.3)	0.02 (0, 0.3)	48
Hoover sign	42 (8.4, 210.1)	0.3 (0.1, 0.7)	6-49
EBM BOX 70.1 EXAMINATION IN THE ICU			
MEWS = 0, predicting hospital death	0.2 (0.1, 0.7)	1.6 (1, 2.7)	9
MEWS ≥5, predicting hospital death	4.7 (2.7, 8.2)	0.6 (0.5, 0.8)	4-15
Warm hands, detecting septic shock if hypotension	2.7 (1.6, 4.5)	0.2 (0.1, 0.4)	54
Bounding pulses, detecting septic shock if hypotension	2.4 (1.3, 4.5)	0.5 (0.3, 0.8)	54
Elevated neck veins, detecting cardiogenic shock if hypotension	4 (2.2, 7.1)	0.2 (0.1, 0.6)	26
Lung crackles, detecting cardiogenic shock if hypotension	1.9 (1.1, 3.5)	0.6 (0.4, 1.1)	26
Elevated neck veins and crackles, detecting cardiogenic shock if hypotension	56.4 (3.5, 916)	0.5 (0.3, 0.7)	26
Pulse pressure increase ≥9-12%, detecting patients who respond to fluid challenge	4.8 (2.6, 8.8)	0.5 (0.4, 0.6)	41-68
Asynchronous breathing during COPD exacerbation, predicting intubation or death	3.2 (1.3, 7.8)	0.5 (0.2, 1)	31
Asymmetric breath sounds, detecting endobronchial intubation	18.8 (7.4, 47.5)	0.5 (0.3, 0.9)	5-50

Continued

APPENDIX TABLE I Likelihood Ratios, Confidence Intervals, and Pre-Test Probability—cont'd

Finding	Positive Likelihood Ratio (95% CI)	Negative Likelihood Ratio (95% CI)	Pre-Test Probability (Range)
Absent breath sounds in patients with ARDS, detecting underlying pleural effusion	4.3 (2.8, 6.5)	0.6 (0.5, 0.8)	26
Anisocoria in patients with coma, detecting structural intracranial lesion	9 (2.8, 28.8)	0.6 (0.5, 0.8)	40
Neck stiffness in patients with stroke, detecting hemorrhagic stroke	5.4 (2.5, 11.3)	0.7 (0.7, 0.9)	18-59
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Cool extremities in ICU patients, detecting low cardiac index	3.7 (2.1, 6.5)	0.8 (0.8, 0.9)	55
Cool extremities in septic ICU patients, detecting low cardiac index	5.2 (2.3, 12.1)	0.7 (0.6, 0.9)	47
0 of 3 findings present, detecting low cardiac index	0.5 (0.3, 0.8)	—	8
1 of 3 findings present, detecting low cardiac index	2.3 (1.6, 3.4)	—	8
All 3 findings present, detecting low cardiac index	7.5 (2.2, 25.3)	—	8
Limb is cool or capillary refill time >4.5 s, detecting elevated lactate	2.2 (1.6, 3)	0.5 (0.4, 0.7)	50
Limb is cool or capillary refill time >4.5 s, predicting multiorgan dysfunction	2.6 (1.9, 3.5)	0.3 (0.2, 0.5)	50
Prolonged capillary refill time, predicting major postoperative complications	12.1 (5.4, 27.1)	0.2 (0.1, 0.5)	17
Prolonged capillary refill time, predicting mortality if septic shock	4.6 (1.7, 12.8)	0.6 (0.4, 0.9)	37
Knee mottling, predicting mortality if septic shock	13.4 (1.9, 97.7)	0.6 (0.4, 0.8)	45

AAI, Ankle/arm index; ACL, anterior cruciate ligament; ACTH, adrenocorticotrophic hormone; ALS, amyotrophic lateral sclerosis; ARDS, acute respiratory distress syndrome; AV, atrioventricular; BMI, body mass index; BNP, brain-type natriuretic peptide; BP, blood pressure; CHF, congestive heart failure; COPD, chronic obstructive pulmonary disease; CSF, cerebrospinal fluid; CT, computed tomography; CVP, central venous pressure; CXR, chest radiography; DP, dorsal pedal; DVT, deep vein thrombosis; DWI, diffusion-weighted imaging; ECG, electrocardiogram; EF, ejection fraction; ENT, ear, nose, throat; FUO, fever of unknown origin; HIV, human immunodeficiency virus; ICU, intensive care unit; LLSB, left lower sternal border; LVH, left ventricular hypertrophy; MCL, midclavicular line; MEWS, modified early warning score; MRI, magnetic resonance imaging; MVP, mitral valve prolapse; PCL, posterior cruciate ligament; PR, pulmonic regurgitation; PT, posterior tibial; RV, right ventricular; SIRS, systemic inflammatory response syndrome; TIA, transient ischemic attack; UGI, upper gastrointestinal; VZV, varicella-zoster virus; WBC, white blood cells.